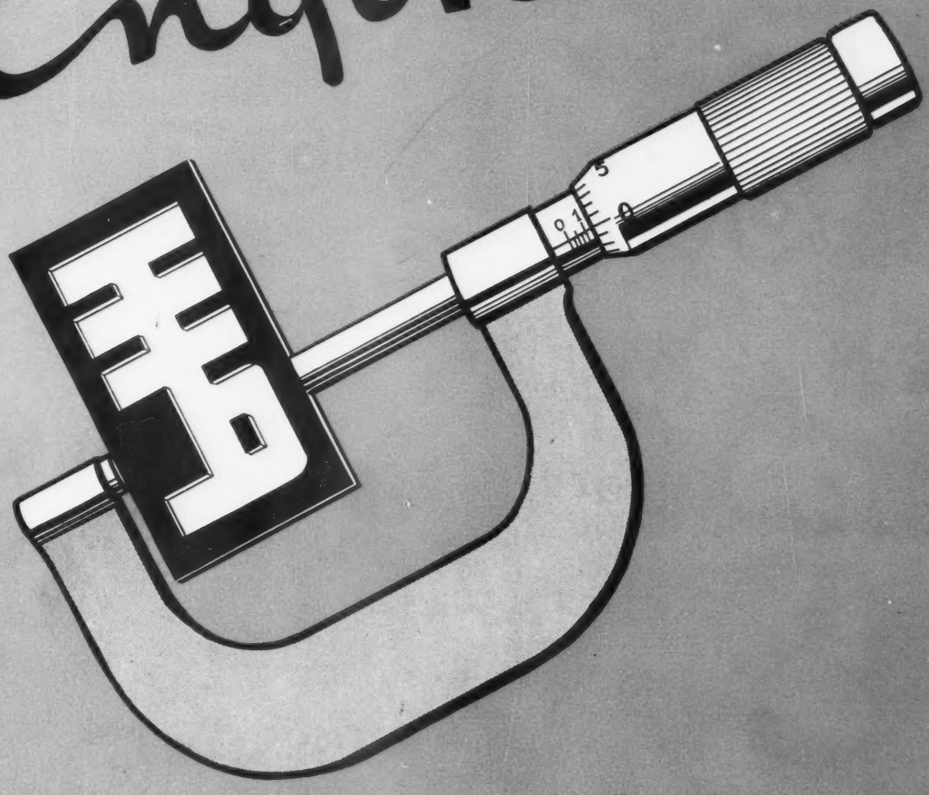
# Printing Equipment Engineer



JUNE, 1940

A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

# ACCURATE WEATHER *for* CASTING

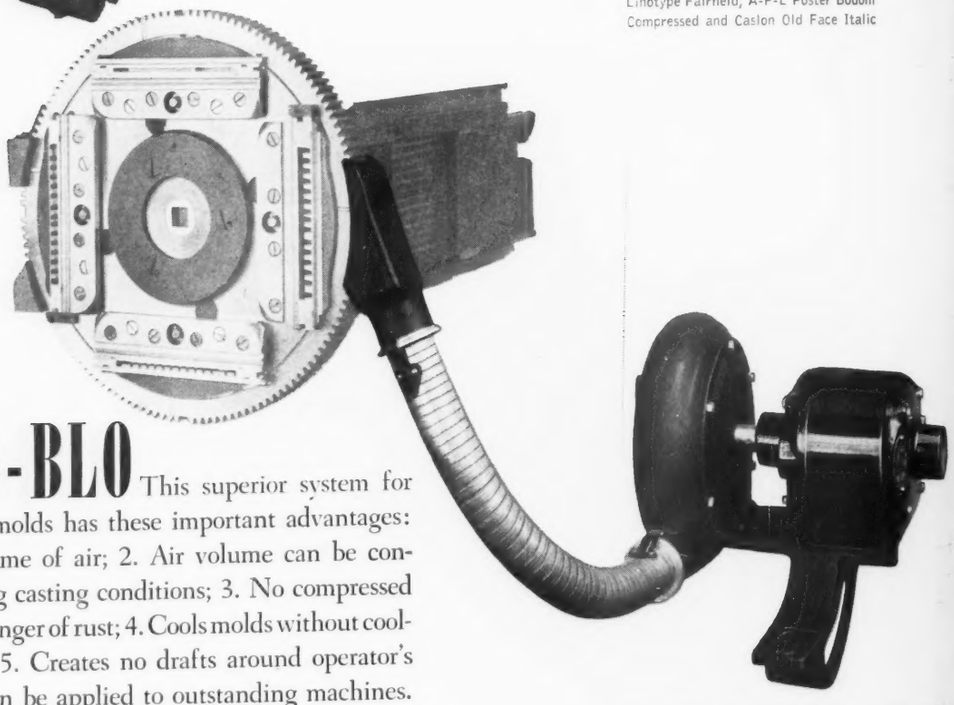
## MICRO-THERM

This exclusive Linotype feature automatically regulates the temperature of Linotype metal in the crucible and at the mouthpiece, operating on a variation of less than two degrees. Micro-Therm replaces manual control of current flow to mouth and throat heaters and provides a system which operates to keep temperatures constant in spite of changes in casting speed or other operating conditions. Result: Better slugs plus greater economy.

All new Linotype Electric Pots are equipped with Micro-Therm. And it can be applied to outstanding pots.

TRADE LINOTYPE MARK

Linotype Fairfield, A-P-L Poster Bodoni Compressed and Caslon Old Face Italic



## THERMO-BLO

This superior system for air cooling Linotype molds has these important advantages: 1. Delivers large volume of air; 2. Air volume can be controlled to meet varying casting conditions; 3. No compressed air is used, hence no danger of rust; 4. Cools molds without cooling mouthpiece; and 5. Creates no drafts around operator's knees. Thermo-Blo can be applied to outstanding machines.

# FEATURES EXCLUSIVE WITH LINOTYPE

# BOSTON

# BUYS 6

**Of The Four Star ★ ★ ★ ★ STAHI MASTER FORMERS after exhaustive tests of this amazing machine in the plants of The BOSTON HERALD and The BOSTON GLOBE. Mechanize your Dry-Mat Shrinkage with Automatic Vacuum Control. Effect Uniform Casting and Printing Levels at Maximum Shrinkage with The STAHI MASTER FORMER**

★ ★ ★ ★

**STA-HI CORPORATION**
**1020 Crocker St. Los Angeles, Cal.**

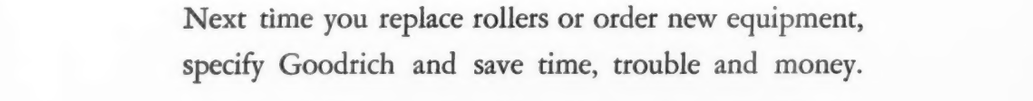
## It's the repeat orders that prove values

# 18 important pressrooms recently ordered 1674 Goodrich Rollers to assure cleaner, faster printing at less cost

ALMOST every important pressroom in the country and many abroad know by experience that Goodrich Rollers assure cleaner printing because they keep mirror-smooth at any temperature... faster printing because they eliminate wash-ups and resetting... lower cost printing because they last longer. Recently these concerns have proved they know those advantages by re-ordering Goodrich for their new press equipment.

| | | |
|---|---|---|
| Arkansas Democrat | Little Rock, Ark. | 32-page Goss color |
| Arkansas Gazette | Little Rock, Ark. | 6 Goss units |
| Binghamton Press | Binghamton, N. Y. | 6 Hoe units |
| Critica | Buenos Aires, Arg. | 6 Hoe units |
| El Mundo | San Juan, Porto Rico | 3 Hoe units |
| El Sol | Buenos Aires, Arg. | 4 Hoe units |
| Greater Buffalo Press, Inc. | Buffalo, N. Y. | 8 Goss units (color) |
| Memphis Commercial Appeal | Memphis, Tenn. | 16 Goss units |
| Miami Herald | Miami, Florida | 8 Hoe units |
| Milwaukee Journal | Milwaukee, Wis. | 12 Hoe units |
| New York Times | New York, N. Y. | 6 Wood units |
| Quincy Patriot-Ledger | Quincy, Mass. | 16-page Duplex Tubular |
| Springfield Republican | Springfield, Mass. | 5 Goss units |
| Syracuse Herald Journal | Syracuse, N. Y. | 2 Goss units |
| Syracuse Post Standard | Syracuse, N. Y. | 6 Hoe units |
| Toronto Star | Toronto, Ont., Can. | 20-cyl. Hoe Multi-color |
| Vancouver Province | Vancouver, B.C., Can. | 8-cyl. Hoe color |
| Worcester Telegram & Gazette | Worcester, Mass. | 9 Scott units |

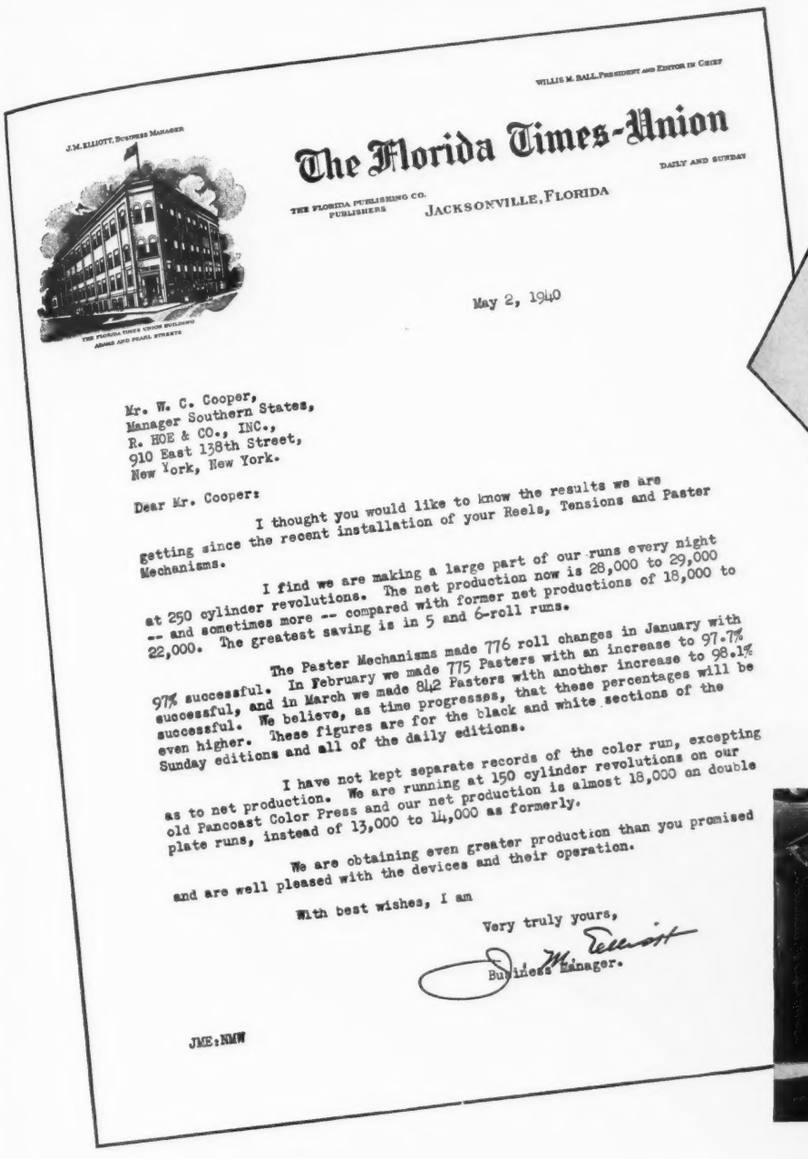
Next time you replace rollers or order new equipment, specify Goodrich and save time, trouble and money.




# Goodrich *Printers'* Rollers

# HOE REELS, TENSIONS and PASTERS INSTALLED

## TO MEET A 56% INCREASE OF CIRCULATION



WILLIS M. BALL, PRESIDENT AND EDITOR IN CHIEF

J. M. ELLIOTT, BUSINESS MANAGER

The Florida Times-Union

DAILY AND SUNDAY

THE FLORIDA PUBLISHING CO. PUBLISHERS JACKSONVILLE, FLORIDA

THE FLORIDA TIMES-UNION BUILDING ADAMS AND PEARL STREETS

May 2, 1940

Mr. W. C. Cooper,
Manager Southern States,
R. HOE & CO., INC.,
910 East 138th Street,
New York, New York.

Dear Mr. Cooper:

I thought you would like to know the results we are getting since the recent installation of your Reels, Tensions and Paster Mechanisms.

I find we are making a large part of our runs every night at 250 cylinder revolutions. The net production now is 28,000 to 29,000 -- and sometimes more -- compared with former net productions of 18,000 to 22,000. The greatest saving is in 5 and 6-roll runs.

The Paster Mechanisms made 776 roll changes in January with 97% successful. In February we made 775 Pasters with an increase to 97.7% successful, and in March we made 842 Pasters with another increase to 98.1% successful. We believe, as time progresses, that these percentages will be even higher. These figures are for the black and white sections of the Sunday editions and all of the daily editions.

I have not kept separate records of the color run, excepting as to net production. We are running at 150 cylinder revolutions on our old Pancoast Color Press and our net production is almost 18,000 on double plate runs, instead of 13,000 to 14,000 as formerly.

We are obtaining even greater production than you promised and are well pleased with the devices and their operation.

With best wishes, I am

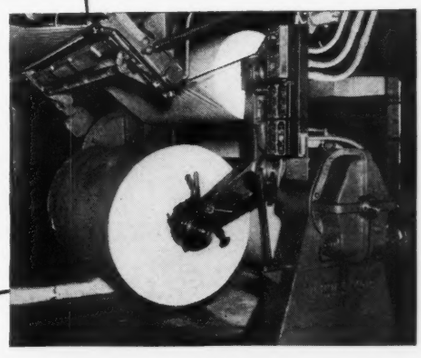
Very truly yours,

J. M. Elliott
Business Manager.

JME:NMW

*Read what the Business Manager says*

**Visit Hoe Headquarters during the A. N. P. A. Mechanical Conference, Drake Hotel, Room 240**

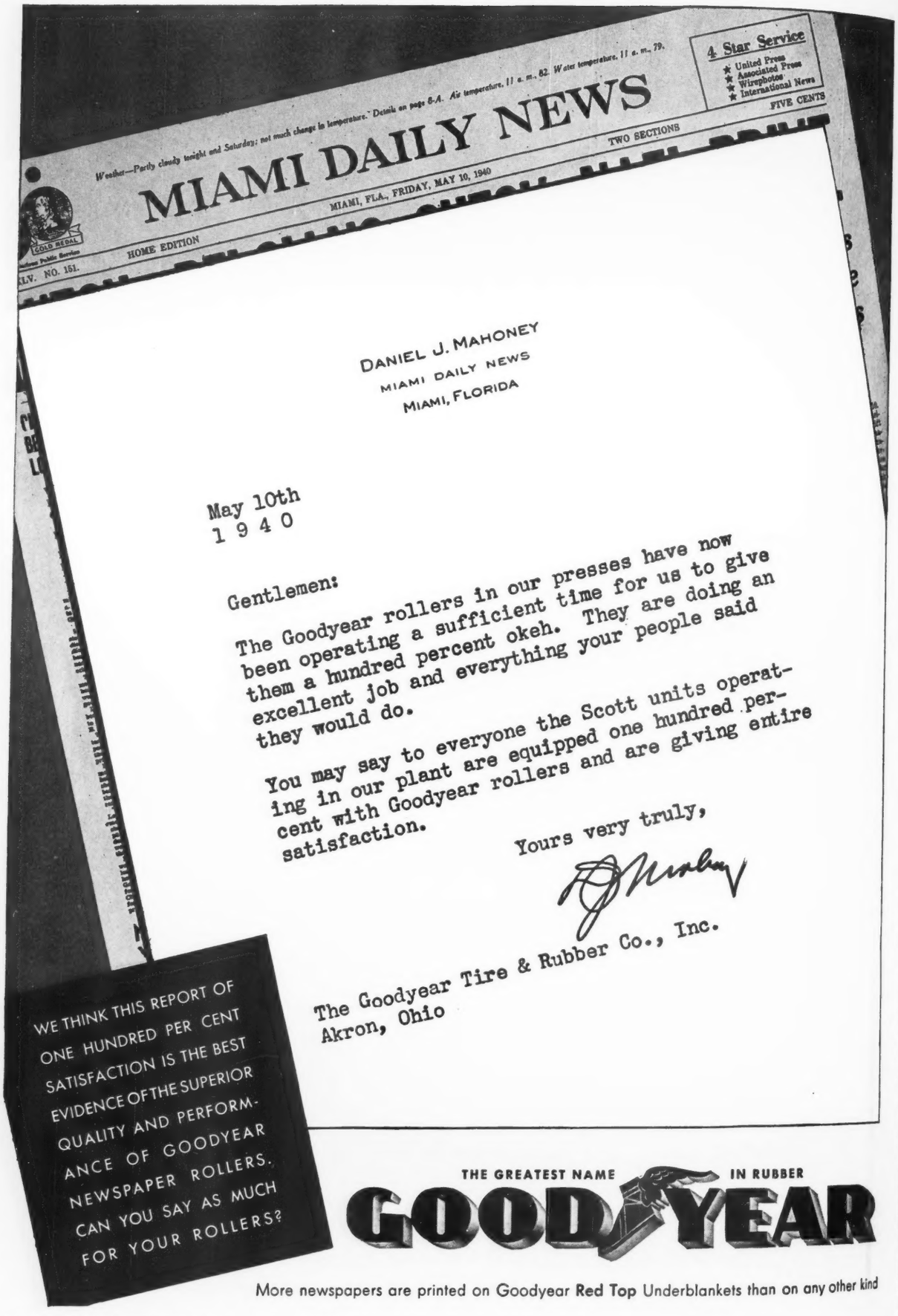


In step with the steady growth of Jacksonville during the past six years, the Florida Times-Union has witnessed a healthy boost in circulation. In the city zone alone, the daily edition has jumped 60% while the total circulation has reached an increase of 55%. To meet the demands imposed by this growth on existing equipment, the publishers recently installed Hoe Reels, Electric Tensions and Full-Speed Pasters. The resulting increase of operating speed cuts down the time required to print a single paper by 6/100ths of a second. To this split second saving the publishers attribute a 50% increase of production per hour ... better printing results . . . earlier deliveries that please the readers of the Times-Union. For other progressive publishers who are enjoying an increase of circulation this experience is significant. It points the way to an excellent solution of the need for increased production which can be accomplished by the simple expedient of installing Hoe Reels, Tensions and Pasters.

# R. HOE & CO., Inc.

**910 East 138th St. (at East River) New York, N.Y.**

**BOSTON SAN FRANCISCO CHICAGO BIRMINGHAM**


MIAMI DAILY NEWS
Weather—Partly cloudy tonight and Saturday; not much change in temperature. Details on page 6-A. Air temperature, 11 a. m., 82. Water temperature, 11 a. m., 79.
4 Star Service
★ United Press
★ Associated Press
★ Wirephotos
★ International News
FIVE CENTS
TWO SECTIONS
MIAMI, FLA., FRIDAY, MAY 10, 1940
HOME EDITION
GOLD MEDAL
XLV. NO. 151.
DANIEL J. MAHONEY
MIAMI DAILY NEWS
MIAMI, FLORIDA
May 10th
1 9 4 0
Gentlemen:
The Goodyear rollers in our presses have now been operating a sufficient time for us to give them a hundred percent okeh. They are doing an excellent job and everything your people said they would do.
You may say to everyone the Scott units operating in our plant are equipped one hundred per cent with Goodyear rollers and are giving entire satisfaction.
Yours very truly,
The Goodyear Tire & Rubber Co., Inc.
Akron, Ohio
WE THINK THIS REPORT OF ONE HUNDRED PER CENT SATISFACTION IS THE BEST EVIDENCE OF THE SUPERIOR QUALITY AND PERFORMANCE OF GOODYEAR NEWSPAPER ROLLERS. CAN YOU SAY AS MUCH FOR YOUR ROLLERS?
THE GREATEST NAME IN RUBBER
GOODYEAR
More newspapers are printed on Goodyear Red Top Underblankets than on any other kind

A TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.


## TECHNICAL BOOKS

- SIZE SELECTION SIMPLIFIED—*By W. Jouett Blackburn.* A book for planning printing sizes; contains wide range of pre-checked dummy sizes, any one of which will cut without waste from standard paper and impose efficiently for standard press equipment. Loose leaf form, bound for hard usage. Price $12.75, cash with order.
- ESTIMATING GRAPHS FOR PRINTERS—*By Fred W. Hoch.* Bound in 16-page, 8½ in. by 11 in. size, printed on heavy white paper. Simple, concise method of figuring accurate production costs based on economic industry cost values. Graphs are based on cost values to which is added fair profit before quoting selling prices. $3 per copy, cash with order.
- PHOTOGRAVURE — *By H. Mills Cartwright.* Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- TIPS ON PRESSWORK — *By G. C. Cooper.* This pocket size book measures 3½ in. by 5½ in. and contains 111 printed pages, heavy paper cover. Covers standard practices on cylinder and platen presses. Price $1.50, cash with order.
- ENCYCLOPEDIA OF LITHOGRAPHY — *Compiled by Russell L. Miles.* Besides technical information about all details of offset-lith set forth in simple language, this book contains discussions on various phases of offset-lith by well known writers. Bound in blue cloth, gold stamping. Illustrated. Size 6 in. by 9¼ in., 212 pages. Price $4.50 per copy, cash with order.
- ETCH PROOFS — *By J. H. Bartz.* Booklet, approx. 6 in. by 9 in. 40 pages and paper cover. Tells reasons for and how to take reproduction proofs. Price, $2.00, cash with order.
- HANDBOOK FOR PRESSMEN — *By Fred W. Hoch.* Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts. $3 per copy, cash with order.
- THE PRACTICE OF PRESSWORK — *By Craig R. Spicher.* We offer copies to our readers at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
- MANUAL OF STEREOTYPING — *By Joseph Goggin.* This 256-page book conveys latest technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.

*Send All Orders With Remittance to*

**PRINTING EQUIPMENT Engineer**

**1276 W. Third Street**
**Cleveland, Ohio**


# Printing Equipment Engineer

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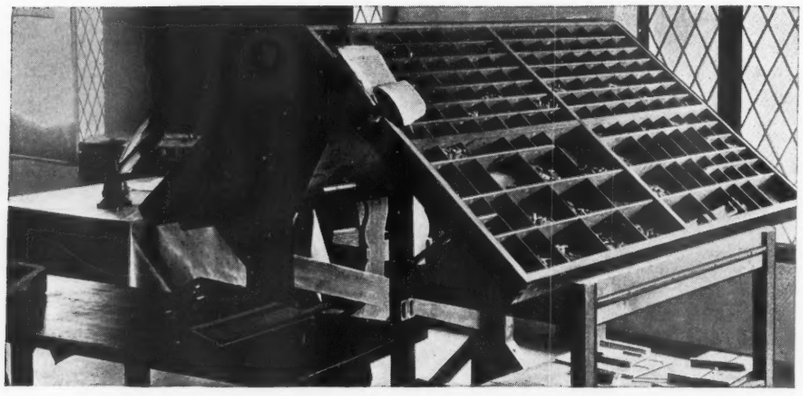
Member Controlled CCA Circulation Audit



**DETAIL OF THE RECONSTRUCTED GUTENBERG TYPE CASE.** *Because the first types were of a large point size, the compartments had to be built large enough to accommodate them. In addition to the simple alphabet, there were special sorts for numerous ligatures and contractions.*

Photo courtesy Douglas C. McMurtrie, Ludlow Typograph Co.

# TYPOGRAPHY *Begins Its Sixth Century*

**By WILLIAM J. ACKER**

FIVE hundred years ago the corner stone was laid for the institution of the graphic arts—the art preservative of all arts. History tells us that along about in 1440 Johann Gutenberg invented a process for printing, with a press, from movable type. Aided by a grant from the Carnegie Corporation of New York, the American Institute of Graphic Arts has appointed a committee to coordinate a nationwide celebration of groups throughout the United States. The International Association of Printing House Craftsmen is celebrating impressively.

Much valuable knowledge of the ancients was lost to the world because there was no method, other than by word of mouth, or tediously achieved and cumbersome manuscripts, to hand such information down to succeeding generations.

The earliest writing was in pictorial form, as exemplified by the Egyptian hieroglyphics. The world's most ancient written record is the Send inscription, dated about 4000 B.C., preserved in the Ashmolean museum at Oxford. It is a limestone cornice of the false door of a tomb.

At that time a form of printing by impression was done by pressing engraved stamps or seals into moist, soft clay, which was then dried and became a very durable record.

Papyrus, a coarse paper made from the papyrus plant, was used for many centuries by professional scribes. Their tools were a reed pen, a jar of water, and a palette with two round depressions to mix the inks. Black ink was lampblack with an aqueous solution of vegetable gum which held the non-soluble black in suspension. A red iron oxide ink was used for the introductory words of paragraphs.

An improvement over papyrus was parchment made from the skin of animals, principally of the sheep and the calf. It was heavier and more expensive than papyrus.

## *Alphabetical Forerunners*

About twenty-eight hundred years ago the Phoenicians were using the alphabet on which our present letter system is based. The Phoenician alphabet had only twenty-two letters. They resembled a primitive idea of ladders, crosses, telegraph poles, pennants, etc.

The word alphabet is from the Greek names for the first two letters: alpha and beta. The Greeks and Romans developed the Phoenician alphabet into our present letter formations. J and U, two of the last letters added, are still placed after Z, instead of their alphabetical sequence, in printers' type and matrix cases. There are many non-roman alphabets in use today, such as Russian, Hebrew, and Arabic.

## *Printing In China*

In China, printing from engraved wood blocks was done many centuries before Gutenberg was born. The oldest printed book (in roll form) now known was produced in 868 A.D. It was printed by Wang Chien for general free distribution in memory of his parents. This book is the "Diamond Sutra," now in the British museum.

Pi Sheng made movable porcelain

*(Continued on Page 86)*

TO MECHANICAL EXECUTIVES:

# When you are in Chicago—

You are cordially invited to inspect the up-to-date Ludlows in our working exhibit at the Drake Hotel, to become familiar with the efficiency and economy the Ludlow today offers to mechanical executives.

• Also see the simple, easily-operated Elrod lead, slug, rule and base caster, producing strip which has been proved to stand up well under the most severe stereotyping pressures.

• The Slug Shear, which is highly useful in making corrections in shell-cast plates, and the Supersurfacer will also be shown in our working exhibit.

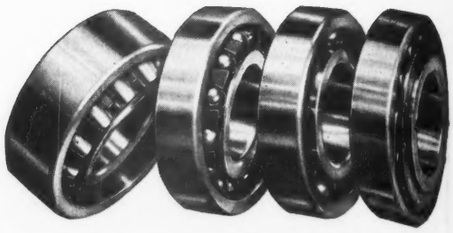
• If you are interested in seeing Ludlow equipment in process of manufacture, you will be cordially welcome to visit our factory. Arrange with any of our representatives at our exhibit at the Drake Hotel regarding transportation there and back.

**LUDLOW TYPOGRAPH COMPANY**

2032 Clybourn Avenue . . . Chicago, Illinois

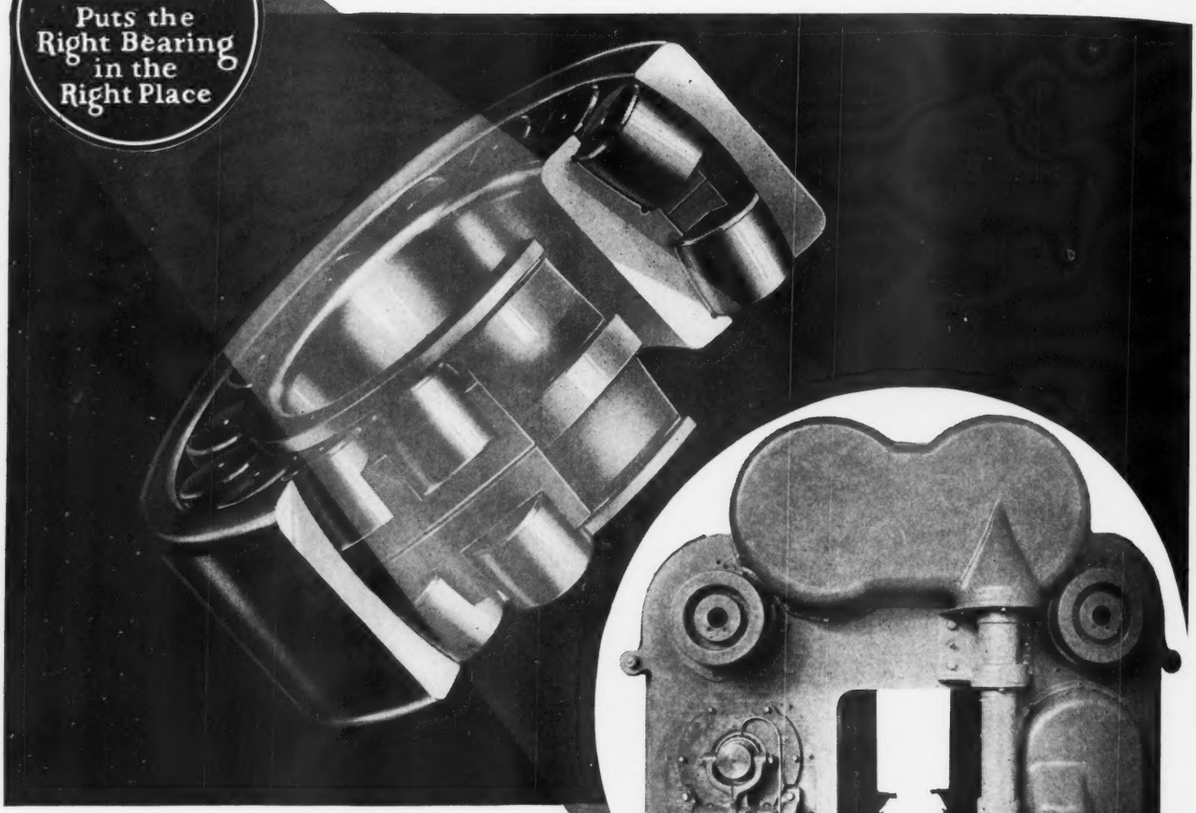
Set in members of the Ludlow Radiant family

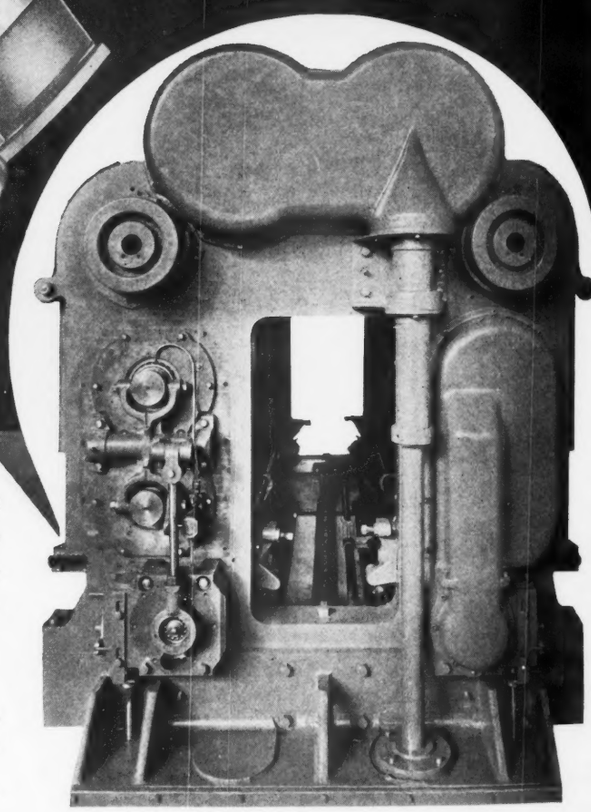
# MODERN



## PRESSES ROLL ON SKF FOR RELIABILITY AT HIGH SPEEDS

SKF Puts the Right Bearing in the Right Place





IT'S a far cry from the presses of 20 years ago to the mechanical marvels of today. Their shapes have been changed through revolutionary design. And their reliability at extremely high speeds has been greatly increased through the use of antifriction bearings.

Practically all leading manufacturers of printing presses, both newspaper and commercial, have found that the use of SKF Bearings promotes high speeds, low starting torque, quick pick-up, and accurate register through axial and radial rigidity. Manufacturers and users alike are urged to bring their bearing problems to SKF. 4590

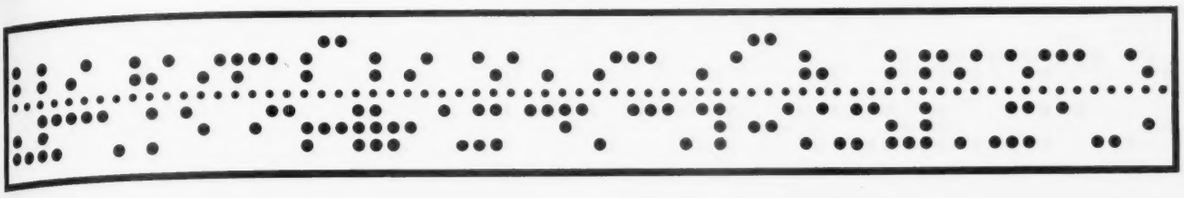
*BUILT BY WALTER SCOTT & CO.*

SKF

BALL & ROLLER BEARINGS

SKF INDUSTRIES, INC., PHILADELPHIA, PA.

# This Tape Reads



## MORE TYPE *in* LESS TIME *with* TELETYPESETTER

Modern newspapers, not only in the United States but in many foreign countries, are now securing more type in less time with the use of Teletypesetter. Teletypesetter can be relied upon to cut the cost of straight matter composition approximately in half.

Users can expect Teletypesetter-equipped line-casting machines to produce 50 to 100 percent greater outputs.

Teletypesetter keyboard perforator can produce tape at 350 to 400 lines per hour average.

These outputs can be obtained after relatively short training periods.

### SEND FOR THIS BOOK

If you are interested in saving money in your composing room, write today for this book. It gives you complete information and details on how to get out a bigger and better paper without having your production costs go up.

*Write for it today*

**TELETYPESETTER CORPORATION**

1400 Wrightwood Avenue — Chicago, Illinois

**TELETYPESETTER**

# Announcing

## . . . for all

***The First Printed Announcement of A Revolutionary Invention Which Has Amazed the Letter Press Industry for an Entire Year.***

● For the first time in the history of movable type it is now possible to print by letter press an almost unlimited number of reproductions of an original image on one sheet *from one printing plate.*

Imagine 10, 20, 30, 40 or more *printed* labels in gangs on one plate—each label guaranteed to be an exact duplicate of the original engraving! And that isn't all! The single printing plate, combining all the individual labels or subjects, is *pre-made-ready* for exact surface uniformity and can be duplicated easily.

Better and faster line up and register are assured, cutting time is reduced 50%, paper costs are lowered, more labels or subjects per sheet of paper are printed, press time is substantially cut.

This remarkable new method of plate making (Pat. App. For) passed the experimental stage more than a year ago and has effected substantial economies for large printers of labels, blotters, playing cards, cartons and direct mail literature.

Unlimited color combinations may be employed and the method is so flexible that changes of color plates of the original set can be introduced without difficulty.

**FOR THE FIRST TIME** in the history of letter press printing this process presents plant owners and superintendents with every advantage of lithography plus the flexibility of letter press, with definite guaranteed economies.

# *a definite step forward*

# large letter press printers

**ONE PLATE** combines a group of individual plates formerly necessary. Each illustration is an exact duplicate of the original.

**CUTTING TIME** is reduced 50%, paper costs are substantially lowered; press time reduced.

**MORE LABELS** or other subjects can be run on a sheet and each reproduction is uniform.

**COLOR WORK** is more economically produced because the plates are pre-made-ready.

Large producers of labels, cartons, direct mail printing and others will be furnished with more complete information, which will be a revelation. Send samples or description of work involving large runs. One of our trained technicians will personally study your problem.

## THE QUALITY ENGRAVING & ELECTROTYPE CO.

CINCINNATI • ESTABLISHED IN 1914

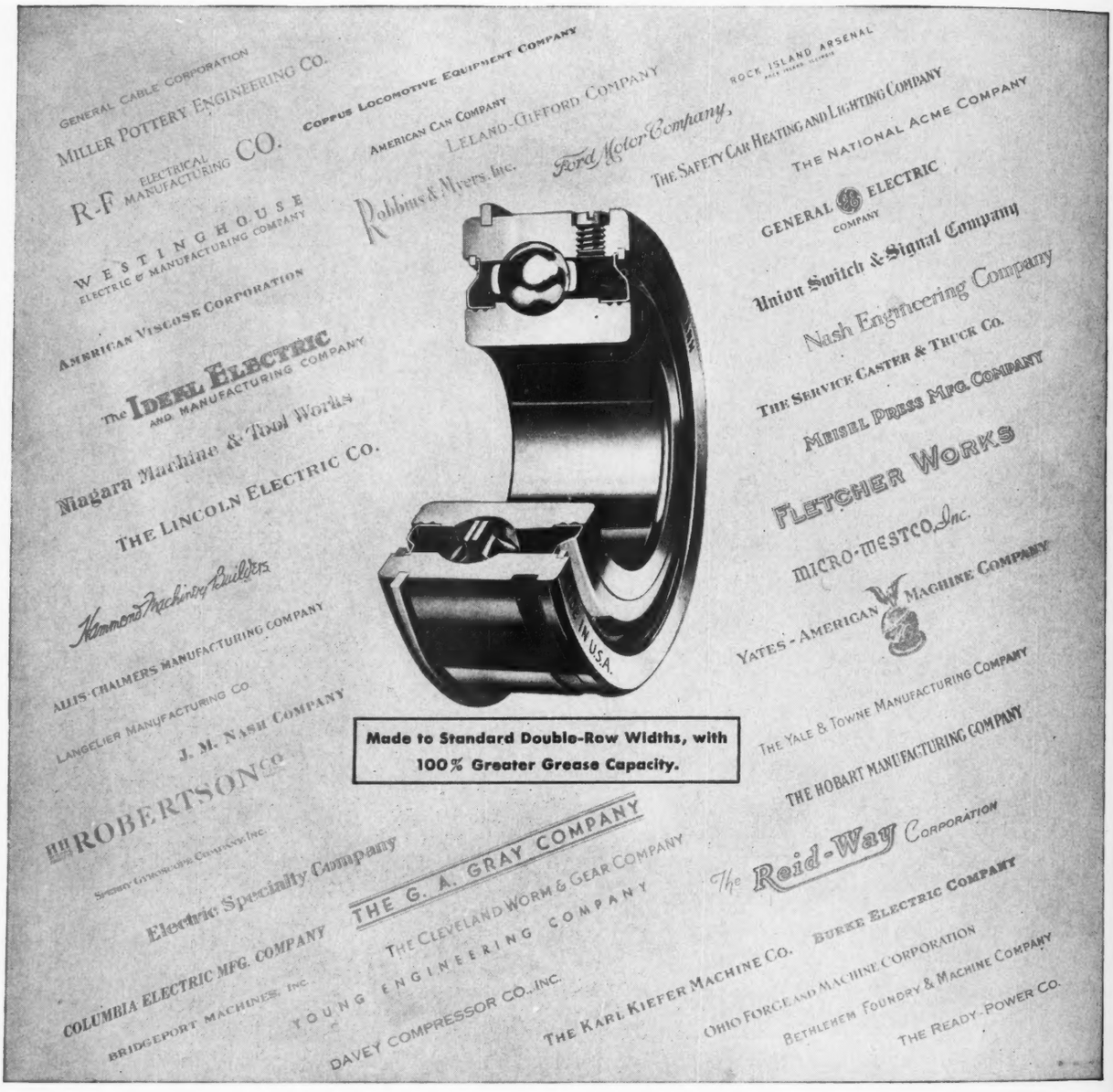
# "CARTRIDGE" BALL . . . BEARINGS

**SIMPLIFY** your design by eliminating supplementary outside closure parts and protective seals.

**PROTECT** against the dirt hazard by the use of highly effective, wearless metal seals that positively exclude foreign matter and retain grease at any angle.

**SAVE** by cutting out many costly machining operations and extra parts, and by speeding up production.

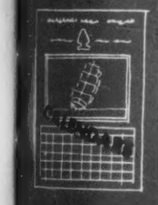
**INSURE** longer life and lower maintenance costs by providing 100% greater grease capacity; refilling plug and removable seals facilitate regreasing and inspection.




The manufacturers whose names appear above are among the many using "CARTRIDGE" ball bearings to advantage in their equipment.

*Write for the Catalog. Let our engineers work with you.*

**NORMA-HOFFMANN BEARINGS CORPN., STAMFORD, CONN. U.S.A.**



# Printer's Ink

## BY GEORGE MATTHEW ADAMS

I REGRET I am not a poet—for, if I were, I would write a poem from my heart praising the wonders of ink. Ink is one of those things that we take as a matter of course, without thinking about its great power for good.

In my library are thousands of books on whose pages are printed words that were once gallons and gallons of ink. Now through these printed words in ink, the great of this earth have come to my very doorstep—or, rather would I say, they have come in these books, printed in ink, as companions, with whom I am privileged to commune at any hour of the day or night!

All praise to him who first invented type for the purpose of printing—but glory be to him, too, who created ink that would stay on the printed page for centuries, thus enlightening all mankind!

Ink speaks "a various language," in every language. It can talk in somber tones, or in tones that vibrate, as I have recently read, "like mist on the waters at Sunup, like dew on morning grasses—or like moonlight!" In the hands of the artist, ink can ride the Rainbow, or rest in dignity among the learned.

Ink has made possible the forward march of civilization. Tons of ink are employed daily to give you the news in your newspaper. It has brought the soul of nature to the printed page, and it has been clothed in beauty such as it has not been before in all the history of the world. It has gone out into the world as one of the most effective of all salesmen. It has been made the vehicle of thought in all its beauty and power.

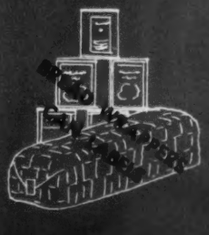
Just for a moment imagine no ink in the world! The light of the mental and spiritual world would almost go out, as though a great cloud had blanketed the sky, shutting out the sunlight. Ink is one of the agents of thought and the enemy of ignorance.

The miracles that experts perform with ink these days is amazing. They almost make it laugh as it does, directed by many an artist, and it is made to soar upon wings at the behest of the poet. But best of all, it brings comfort and joy to millions, no matter in what form it takes its shape. In softened shades it can be made to climb the sunbeams, or chant its mellow music among the stars—in the blue.

It is possible for ink even to mimic the emotions and sing to the silent soul!

*Copies of this article suitable for framing available from Howard Flint Ink Company.*

Flint Inks



Flint Inks

*A correct grade for every make and speed of press.*

# Arrowhead Black

**Perfect press performance and improved appearance. These two vital factors explain today's widespread demand for Arrowhead Black and Colors.**

Plates by co
The Peoples Outfitt

# Arrowhead Colors

**Whether it's one or four colors, you'll get better results with Flint Inks. Arrowhead Colors on daily editions perform and print perfectly at all speeds.**

***Every Flint Ink is a good ink.***

Flint Inks

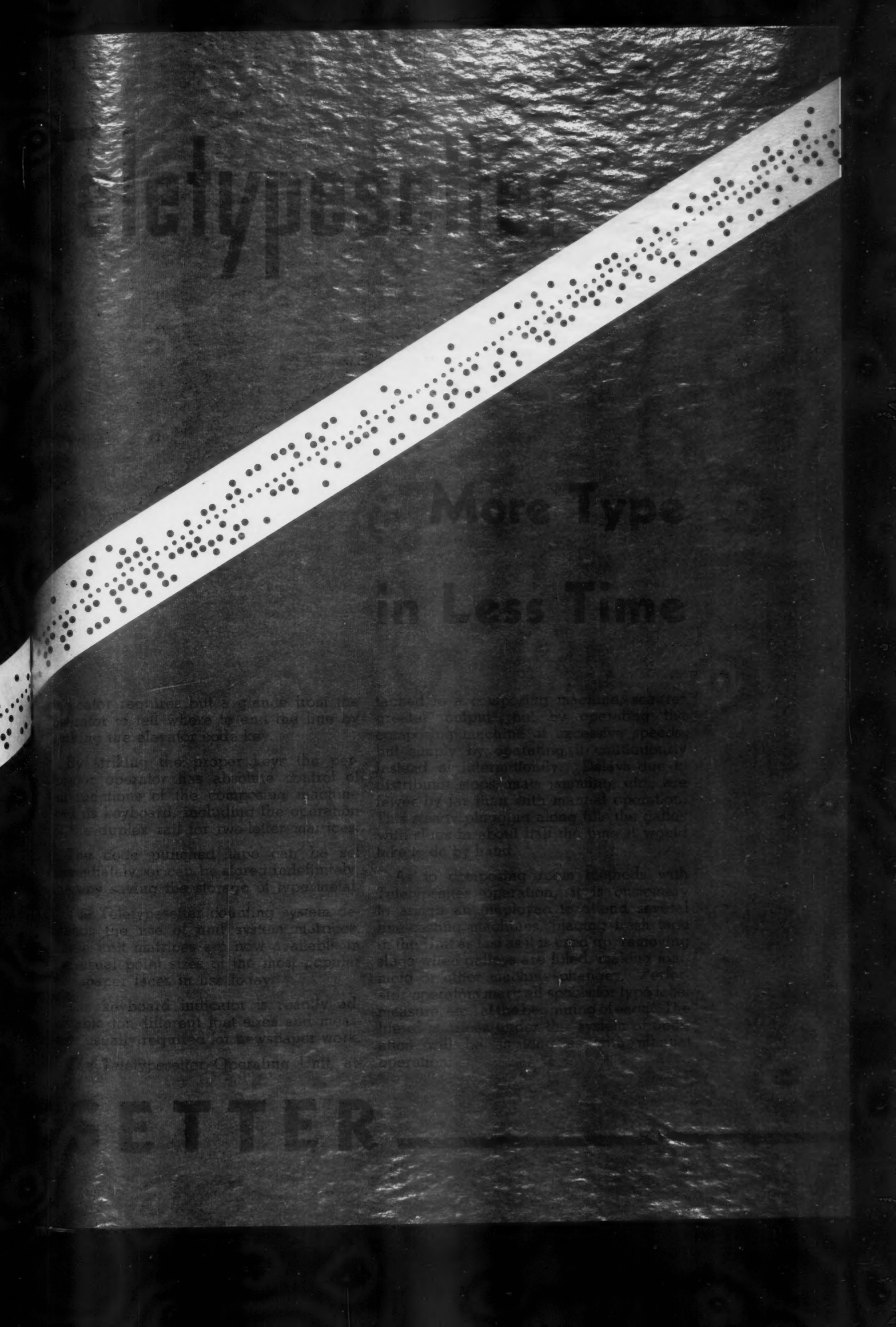
This insert was printed with the approved A. N. P. A. shades of Arrowhead Colors

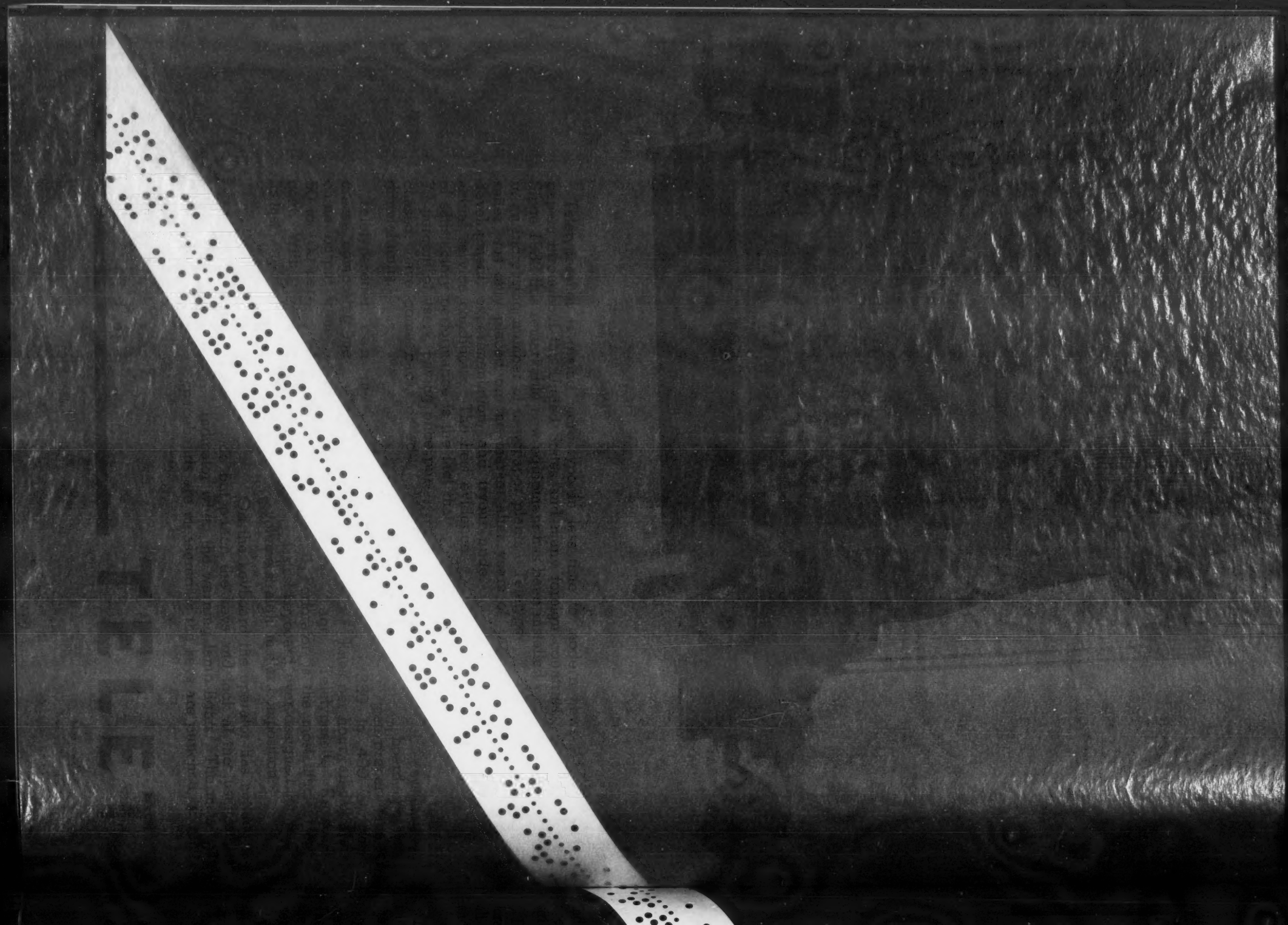
**Howard Flint Ink Company**

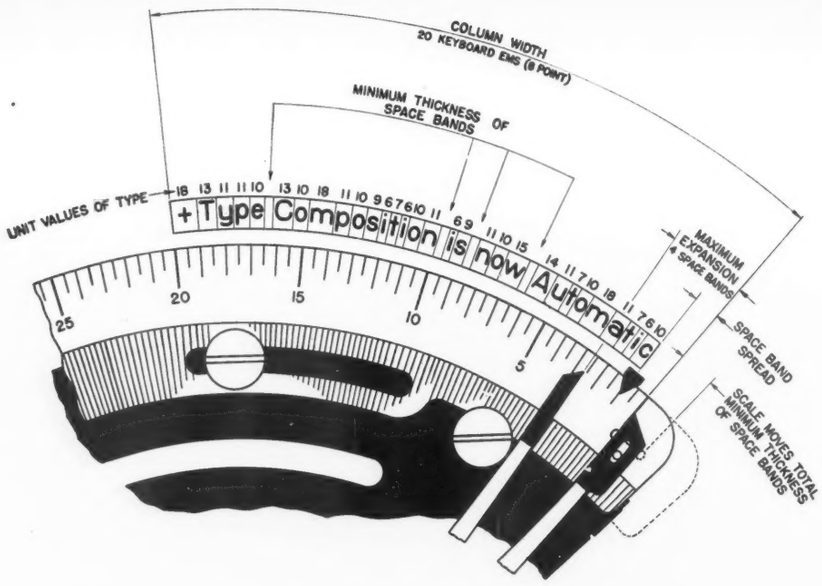
DETROIT CHICAGO NEW ORLEANS HOUSTON DENVER ATLANTA CLEVELAND INDIANAPOLIS

# Teletypesetter

## *for the* MODERN NEWSPAPER


More Type
in Less Time




COLUMN WIDTH
20 KEYBOARD EMS (6 POINT)
MINIMUM THICKNESS OF SPACE BANDS
UNIT VALUES OF TYPE
+Type Composition is now Automatic
MAXIMUM EXPANSION OF SPACE BANDS
SPACE BAND SPREAD
SCALE MOVES TOTAL MINIMUM THICKNESS OF SPACE BANDS

## TELETYPESETTER PERFORATOR

The Keyboard of this unit resembles that of an ordinary typewriter. It can readily be operated by the touch system, thus making possible a high output. Copy to be set is transcribed by the Teletypesetter Perforator operator into code tape, which is given out to the composing room. This tape provides all the necessary controls for line casting machine keyboard operation; gauges the width of the line of matrices and spacebands within the limits of the justifying mechanism; operates the elevator and sends the line in to cast as in the case of manual operation of the composing machine keyboard.

On the keyboard the keys corresponding to the ordinary alphabet are arranged in exactly the same way as on a standard typewriter. Since the requirements for printing make it necessary to provide additional characters, the keyboard is somewhat wider. The complete keyboard consists of sixty keys and the space bar. All code combinations for the operation of the ninety keys, space bar, elevator, etc., of the line casting machine are thus controlled from the Teletypesetter Perforator.

A shift key is used to obtain upper case characters in the regular alphabet and the upper characters on all keys where the keybuttons are marked with two characters.

## TELETYPESETTER OPERATING UNIT

This Unit may be applied to ninety-channel slug line casting machines in their current models, not equipped with side magazines. The application of Teletypesetter Operating Unit does not interfere with manual operation of the composing machine keyboard. The design of the Unit permits quick removal for inspection or cleaning. Its simple and rugged construction will meet with the approval of machinists, and maintenance can be handled along with their routine work.

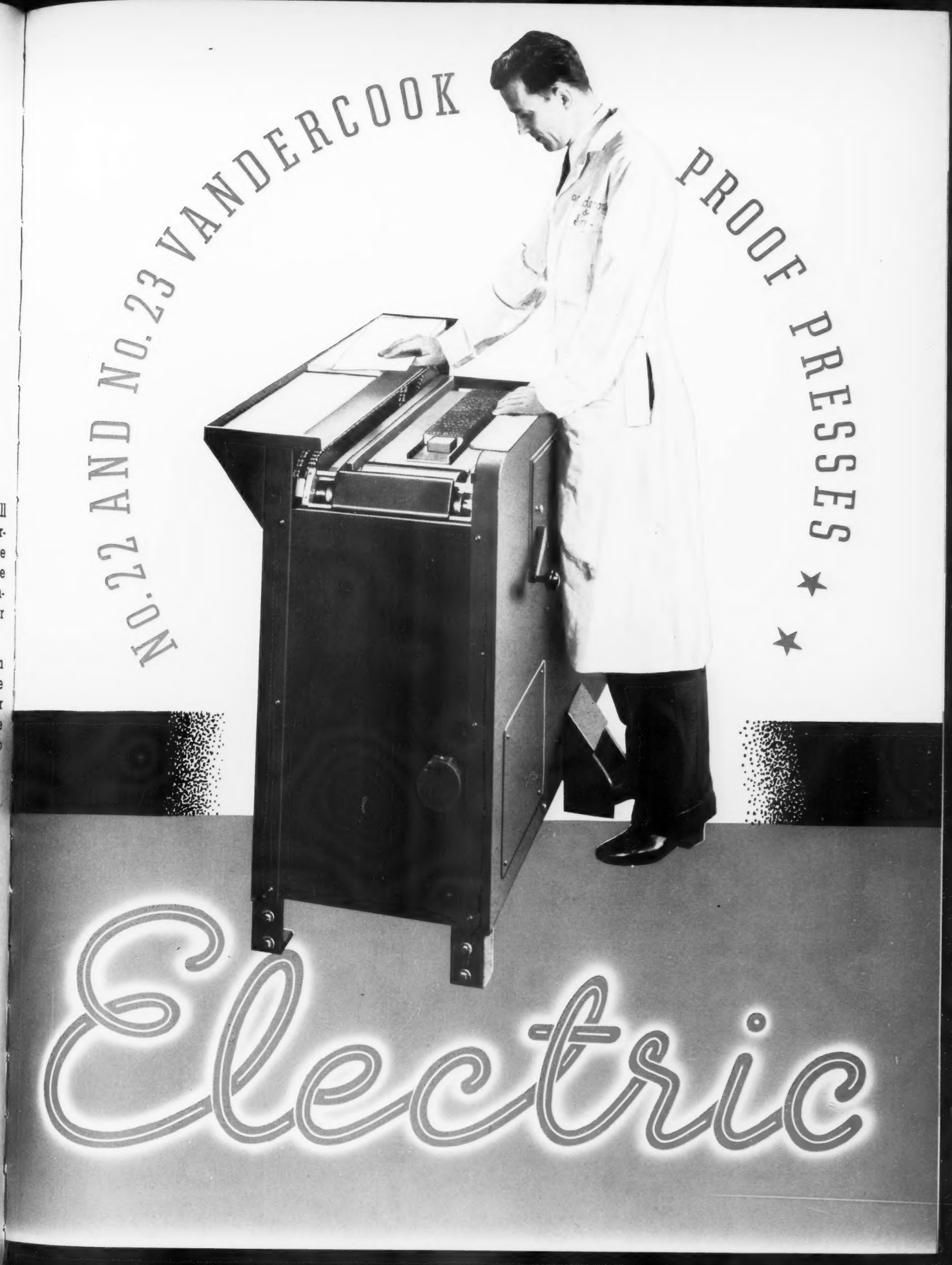
The method of operation is as as follows: The tape previously prepared by the perforator is placed on a reel at the right of the Operating Unit. The inner end of the tape is placed under the tape lid with the feed holes meshed with the pins of the feed wheel. The lid is latched, the starting lever is thrown to the operating position, and the tape is automatically fed along a step at a time.

Each time the tape steps forward, a mat or spaceband is dropped. When the elevator code signal arrives, the tape is automatically stopped, the elevator rises, delivers the line and returns to assembling position, and the tape automatically resumes feeding.

The Operating Unit is driven from the intermediate shaft of the line casting machine, and no additional power is required for its operation.

# TELETYPESETTER CORPORATION

**1400 Wrightwood Ave., Chicago, Ill.**


NO. 22 AND NO. 23 VANDERCOOK
PROOF PRESSES
Electric

FORTY PROOFS A MINUTE may be proved on No. 22 or No. 23 Vandercook Electric Proof Presses. Galley proofs of type, advertisements, plates, book and catalog pages, within the size range may be proved faster on the No. 22 or No. 23 Vandercook than any other way.

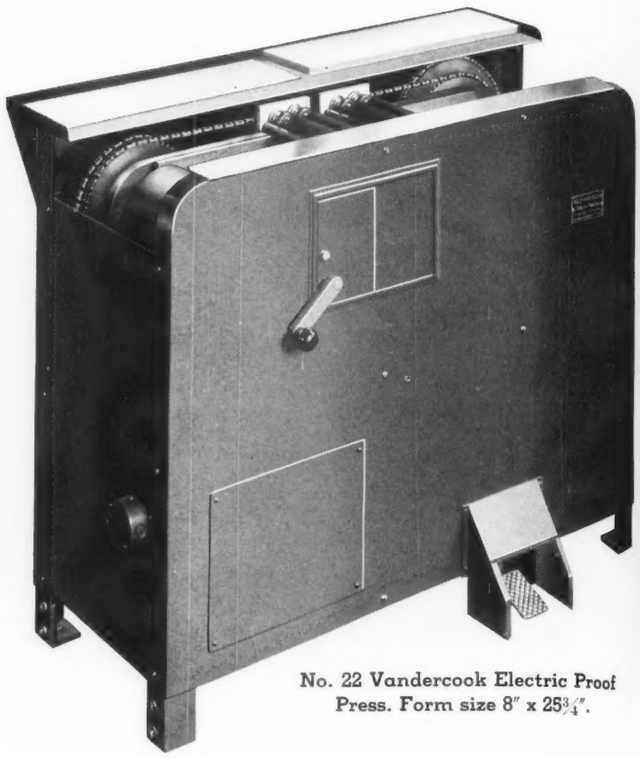
No. 22 and No. 23 Vandercook Electric Proof Presses are sturdily constructed and easily operated. They are electrically powered, with motor driven inking system. Printing quality is good, meeting every requirement for checking and reading proofs.

A touch of a lever on the front of the press starts the motor and moves the vibrator into contact with the revolving ink drum. A step on the foot treadle starts the revolution of inking form rollers and impression cylinder. The movement is over, around, and under the press bed.

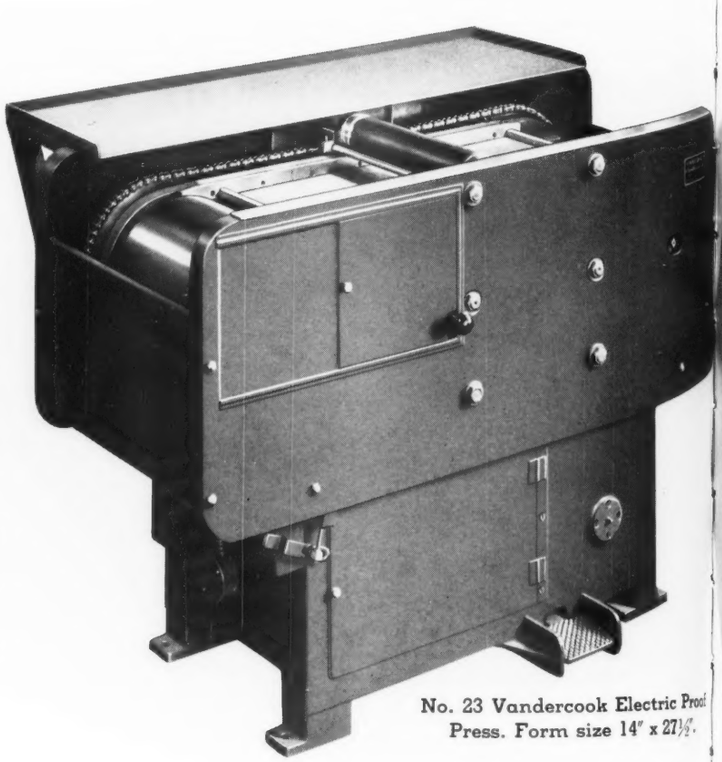
Form rollers are inked through contact as they pass the inking drum. They continue their cycle, inking the form. The sheet to be printed is laid on the form, the impression cylinder passes over, and the sheet is removed, before the form rollers repeat inking operation.

The speed of production is limited only by the ability of the operator. The standard speeds available on both the No. 22 and No. 23 are 40, 30 and 20 proofs per minute.

The compact design, and convenient arrangement of feed and delivery board facilitate operation. (See back page.) Open press bed permits rapid change of galleys. The entire inking system may be washed in a few minutes.



No. 22 Vandercook Electric Proof Press. Form size 8" x 25¾".



No. 23 Vandercook Electric Proof Press. Form size 14" x 27½".

# No. 22 VANDERCOOK *Electric* PROOF PRESS

Many printers and publishers having type or slug casting equipment will find the No. 22 Vandercook Proof Press a profitable investment. It is a requirement for the economical and speedy proving of type or slugs in galleys as they come from the machines.

It can be used for proving smaller advertisements and book pages. It will print good proofs of halftones.

The No. 22 Vandercook Electric Proof Press shortens the time between the composing machines and the proof room. It prints good, clear proofs—essential to accurate reading.

The No. 22 Vandercook Electric Proof Press should be a part of every well equipped composing room. It will pay big dividends in faster production.

**STANDARD EQUIPMENT**

One-fourth H.P., A.C. or D.C. Motor . . . one set Rubber Form Rollers and Vibrator . . . one Vandercook special three-density Vulcanized Rubber Impression Cylinder . . . one pound Vandercook Composing Room Black Ink . . . necessary Tools.

**OPTIONAL EQUIPMENT**

Casters with Locking Device to hold Press steady while in operation.

**SPECIFICATIONS**

Bed size 10″ x 25¾″ . . . Form size 8″ x 25¾″ . . . floor space 2′ x 4′ . . . crated shipping weight 830 lbs.

# No. 23 VANDERCOOK *Electric* PROOF PRESS

Tabloid size newspaper pages, full six column advertisements, catalog, magazine and book pages, and small jobs in galleys can be proved on the No. 23 Vandercook Electric Proof Press at speeds up to 40 proofs a minute. While the maximum form size is 14″ x 27½″ the speed and method of operation is the same as the No. 22 Vandercook.

Many leading printers and publishers are using the No. 23 Vandercook Electric Proof Press for all reading proofs within the size range.

The United States Government Printing Office recently installed the fourteenth No. 23 Vandercook. Many leading newspapers use the No. 23 Vandercook for proving large and small advertisements in galleys.

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**OPTIONAL EQUIPMENT**

Casters with Locking Device to hold Press steady while in operation.

**SPECIFICATIONS**

Bed size 15″ x 27½″ . . . Form size 14″ x 27½″ . . . floor space 3′ x 4′6″ . . . crated shipping weight 1500 lbs.

Vandercook Electric Proof Presses are designed for fast operation and quick galley changes. Note the accessibility of the No. 23. Construction of the two presses is similar except for size.

# FEATURES
## OF THE No. 22 AND No. 23
# VANDERCOOK *Electric* PROOF PRESSES

★ Up to forty good proofs per minute. Rate of speed can be changed to meet the ability of the operator.

★ Precision construction throughout. Compact design facilitates operation. Little floor space is required.

★ Impression Cylinder and Inking rollers are rigidly held down to Bearers, insuring quality of impression over the entire form.

★ Vandercook Special three-density Vulcanized Rubber Impression Cylinder insures good proofs of forms varying as much as .015" in height.

★ Vandercook Rubber Form Rollers and Vibrator require no adjustments. Hot metal will not injure the Vandercook Rubber Form Rollers.

★ Large Motor driven Ink Drum, Vibrator, and four Form Rollers insure thorough ink distribution.

★ All Shafts carried in Ball Bearings with lubricant sealed in.

★ Clutch and Brake are equipped with Raybestos Molded Facings.

# VANDERCOOK & SONS

**Main Office and Factory**
**900 North Kilpatrick Avenue, Chicago**

**Eastern Branch**
**216 East 45th Street, New York City**

Form No. 9216

Printed in U.S.A.

# *First metropolitan* DAILY

**produced entirely by OFFSET**

**SAMPLE** pages 1-2 and 15-16
Hartford (Conn.) NEWSDAILY

*see our display*
of how the NEWSDAILY is made
in Booths 79-81, ANPA Mechanical
Conference, at the Drake Hotel,
Chicago, June 10, 11, 12, 1940.

*Offset Division* · AMERICAN TYPE FOUNDERS
200 ELMORA AVENUE · ELIZABETH, NEW JERSEY
*Branches and Agents in Twenty-three Principal Cities*

VOL. 1, No. 41
FIVE CENTS

HARTFORD *Newsdaily*

FRIDAY
APRIL 19, 1940

# BRITISH POUNDING A PATH TO ELVERUM

## THESE WOMEN ARE ON THEIR WAY TO FRONT

General Mailse Graham, British military attache in Paris, reviews British women ambulance drivers at their headquarters in Paris. It is not known definitely how many are now serving at the front.

Britain showed the world today that she knows something about land strategy and warfare, too, when an undisclosed number of her troops made a lightning march last night across southern Norway. Today they are joined in battle with Norwegian troops against 1200 Nazis in the vicinity of Elverum, north of Oslo.

The report, headlined in the Stockholm Aftonbladet this afternoon, caused a sensation. It was not known where the Britons landed or what the size of their force was.

But they may have scored a major strategical coup. By drawing attention to Narvik by naval battle, and to Stavanger by constant bombings, the British have split the Nazis' attention, thus making possible numerous landings along the coast south and north of Trondheim. The continued silence of London on the scope of the operations gave weight to this belief.

This was the major sensation in the northern struggle today, though the war kept on at high gear on other fronts as well. There was heavy fighting around Bodoe, 100 miles south of Narvik, and at the latter port, the Germans were reported to have bombed a British landing party convoy from the air, scoring several direct hits. The British were also reported to be landing at Tromsoe, north of Narvik.

The Dutch extended their state of siege to cover the entire nation and closed down on all Communist or Nazi party meetings.

### Iron Guard Again

In Bucharest, King Carol conferred at his palace this morning

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NEW HAVEN, April 19—William Jackson, son of US Attorney General Robert Jackson, this morning let loose a blast against war in general and against US participation in the current conflict, in particular. His speech was part of the peace demonstra-

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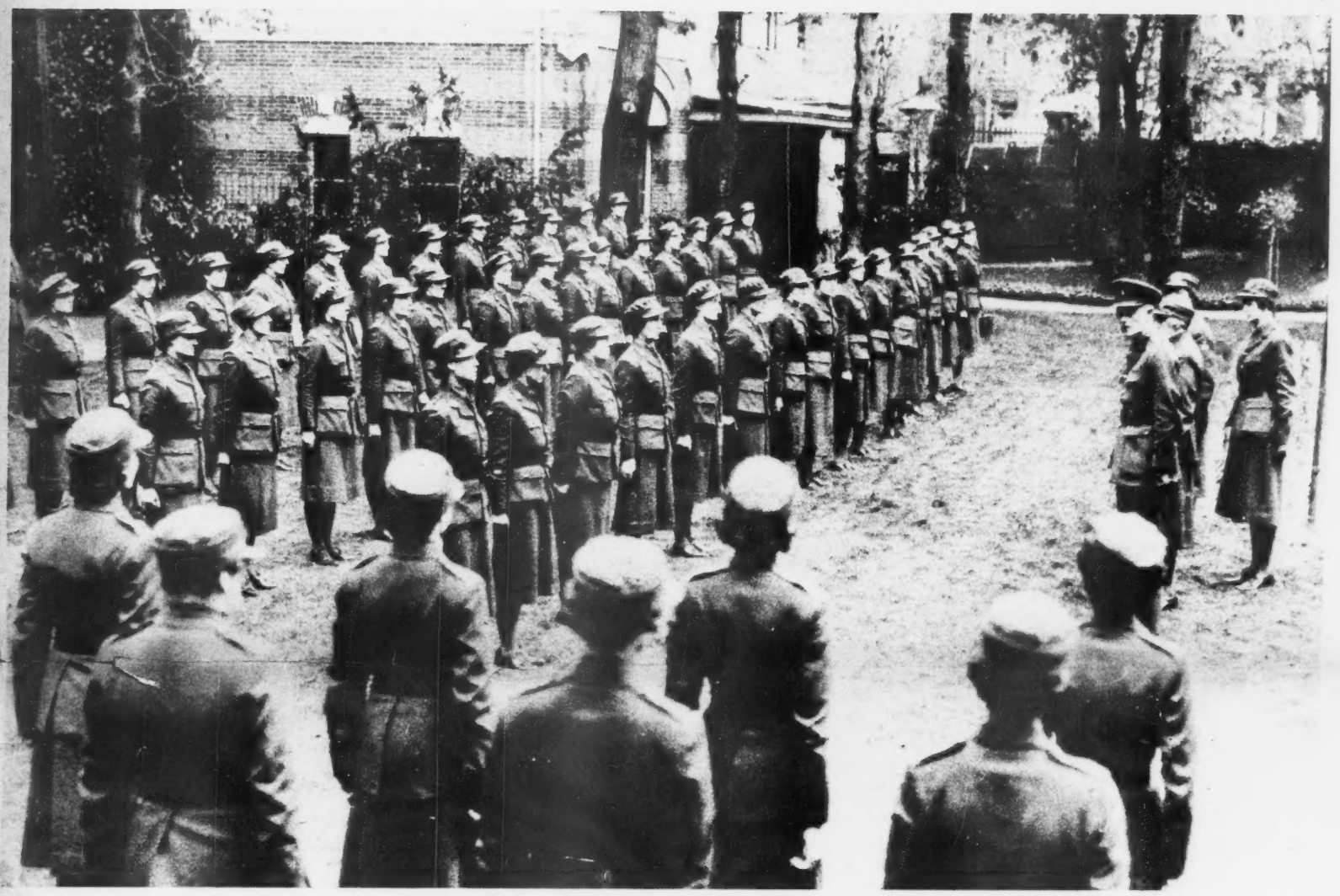
The vote was listed as unan-



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(Continued on Page 9)

## 'CAN'T STAND BY' —IN ITALY

ROME, April 19—A possible hint that Italy may be preparing to enter the war was given tonight in Mussolini's personal newspaper "Popolo d'Italia."

In an article headed "Hour of Destiny" the Fascist paper said:

"A great people such as ours which has proclaimed itself the artisan of history cannot stand by and watch events which will change the face of the continent."

# EYEWITNESS CALLS NAZI CONTROL LOOSE

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KONGSVINGER, NORWAY (via Telephone to Stockholm), April 19—Adolf Hitler has bitten off a huge mouthful in his efforts to swallow up Norway. German troops have occupied southeastern Norway from Oslo to the Swedish border, but their hold on the area is precarious.

The first thing that strikes a neutral observer visiting Norway is the apparent inadequacy of the German garrisons. Nazi troops are everywhere—but they are spread out over the country in tiny units.

Utilizing the motorized infantry and cavalry, the Germans have struck out fanwise from Oslo and have reached deep. I arrived at Kongsvinger two days after the Germans had taken the city. I had expected to find a strong garrison and to see the city bristling with Nazi field guns, tanks and planes. Instead, I found more than a few companies, no tanks, no heavy guns and no planes.

### Motorized Units

The Germans executed their blitzkrieg perfectly. Working from a smartly-devised plan German motorized units, small and compact, swung out from Oslo. These motorized units moving 50 and 75 miles in a single day, occupied cities, towns and fortresses before the Norwegians awakened fully to the fact that their country had been invaded.

The Germans sent their best fighters to Norway. Every man I talked to in Kongsvinger had been under fire in Poland.

I crossed the frontier from Sweden into Norway in an American-made automobile on which a Swedish flag was displayed

(Continued on Page 9)

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The vote was listed as unanimous. It could not be learned immediately how many deputies refrained from casting their ballots.

The lower House of Parliament was called into surprise session this morning, following a three-day secret meeting of the Senate. The upper House adjourned last night without taking a vote on any motion of confidence in the Government. However, Senate President Jeanneney informed the premier that the reports of his war committees had been favorably received.

The Chamber of Deputies vote tonight means that Reynaud's new government now has a working majority for support. The chamber gave the new regime only a one-vote margin in a previous vote of confidence before the Easter holidays.

Britain showed the world today that she knows something about land strategy and warfare, too, when an undisclosed number of her troops made a lightning march last night across southern Norway. Today they are joined in battle with Norwegian troops against 1200 Nazis in the vicinity of Elverum, north of Oslo.

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### Iron Guard Again

In Bucharest, King Carol conferred at his palace this morning with several members of the outlawed, pro-Nazi Iron Guard, which he has previously tried to exterminate. He was thought to be seeking a broadening of the cabinet without at the same time

(Continued on Page 9)

**TONIGHT—Cloudy, followed by showers.**

**TOMORROW—Showers, not much change in temperature.**

**47 at 7:30 a. m.**
**59 at noon.**

**The Connecticut River is 16.13 feet high and is expected to crest tomorrow at 18.5 feet.**

**News from Transradio Press Service**

**N. Y. Times Wide World Wired Photos**

# LOCAL

## BEEKEEPERS HOLD ANNUAL MEETING

*—ON SATURDAY*

Early tomorrow morning (9:30) 100 men will gather at Capitol Hill to discuss beekeeping, honey and beeswax. It will be the annual meeting of the Connecticut Beekeepers' Association.

After the business has been disposed of, B. A. Hildreth of East Hollington, Mass., will talk on "Renting Bees."

There are but two honey producers in the state, Cyril B. Simpson of South Glastonbury, president of the association, and Allen Latham of Norwichtown. The other members, representatives of all trades and professions, keep bees for a hobby. Outside of the association are about 2000 more interested in bees as a sideline.

➤ Hearings on 11 applications for zoning ordinance modifications will be held Tuesday night at 8. All but two are for new automobile parking stations and garages.

## ATTACK FIZZLES

*—IN WEST HARTFORD*

Double political job-holding will not become an issue among the town's Republicans. Last night the executive committee of the GOP Club rejected by a unanimous vote the proposed resolution disapproving the simultaneous holding of state and party jobs. Directed particularly at Town Committee Chairman John T. Dunn, also a county commissioner, and Judge Jacob Schwolsky, also leader of the seventh district GOP committee, the resolution was turned down in order to preserve party peace during campaign time.

## STATE EMPLOYES PLAN THEIR MEET

*—ON SATURDAY*

Bernard Kofsky, senior examiner at the Hartford office of the Connecticut State Employment Service, has been appointed chairman of the resolutions committee for the semi-annual convention of the Connecticut Labor Department Association to be held Saturday at Higgins Inn, Middletown.

Others on this committee are Harold E. Hills and Charles R. Rowe of the Central Office, Unemployment Compensation Division; William Lahey, Bridgeport; George Bernstein, Danbury; Joseph J. Ciccosanti, Thompsonville; and Vincent O'Meara, Torrington.

It was indicated today that a resolution calling upon Governor Baldwin to exercise extreme care in the appointment of a new personnel director would be introduced. It was also thought the organization would be asked to support a resolution to reduce the working hours of state employes to 35 a week, thereby eliminating Saturday work so far as practicable.

Rev. Dr. John P. Boland, chairman of the New York State Labor Relations Board and former vice-president of the Catholic Industrial Conference of America, will address the meeting on the subject "Government Speaks to Labor." Some 400 members throughout the state are expected to attend the convention which will be followed in the evening by a program of dancing and entertainment.

➤ A Hartford girl who migrated to New York City 12 years ago to make her fortune received considerable publicity in a recent edition of the New York Post. Her name is Mary O'Keefe. She is, says the Post, a "minor career woman" of the variety who keeps the wheels of progress turning faithfully, prospering comfortably in the semi-oblivion of a $30-a-week income in New York City. Miss O'Keefe was analysed and publicized more intimately than the proverbial goldfish. Nothing was said in the Post's article, however, concerning her longing, or lack of longing, for her home town.

## DEMOCRATS TO CONVENE

*—IN NEW HAVEN*

Last week it was the Young Republicans. This week it is the Young Democrats who will play and work at the Hotel Taft. Today and Saturday over 500 delegates from 100 clubs in Connecticut will attend the eighth annual convention, preparing resolutions for the big state convention, renewing old acquaintances, dining and dancing.

The Jefferson Day banquet will follow the convention Saturday at 7 p.m. At the same time similar affairs will be going on

expected to be John T. Allen of New London. Joseph N. DePaola of Meriden is in charge of arrangements.

## FIRE RECORD

From noon, April 18 to noon, April 19:

12:56 p. m. Rear 29 Hungerford St. Lint burning in dry cleaning machine. Slight damage.

1:00 p. m. Block, 70 Henry St. Overflow of oil. Slight damage.

7:43 p. m. Box 81, Main and Capen St., AME Zion Church. 2051 Main St. Short circuit. Slight damage.

8:41 p. m. Shed, rear 835 Park St. Slight damage.

7:43 a. m. Jack the Tire Expert. 168 High St. Short circuit. No damage.

# —HEALTH & SCIENCE—

## 'QUACK CURES ARE INCREASING'

*—SAYS DISEASE EXPERT*

Medical quacks, charlatans and unscrupulous druggists who are cashing in on US fear and ignorance about venereal disease were said today to be more prevalent than five years ago.

Dr. Walter Clarke, director of the American Social Hygiene Association, told the New England Health Institute this afternoon that a survey of 35 cities showed that 62% of the drug stores visited were willing to diagnose and sell some kind of "remedy" for syphilis or gonorrhea; 31% would not diagnose but did sell the quack cures. Only seven per cent of the drug stores refused to diagnose or sell.

Dr. Clarke suggested three ways of speeding up the control of US venereal disease: suppress the quack druggist, pass laws to stop the sale of unreliable remedies, educate the man in the street on the dangers of syphilis and gonorrhea.

Yesterday the Institute was told that if children were trained to understand and control their emotions, it would be a constructive step toward ridding the world of war.

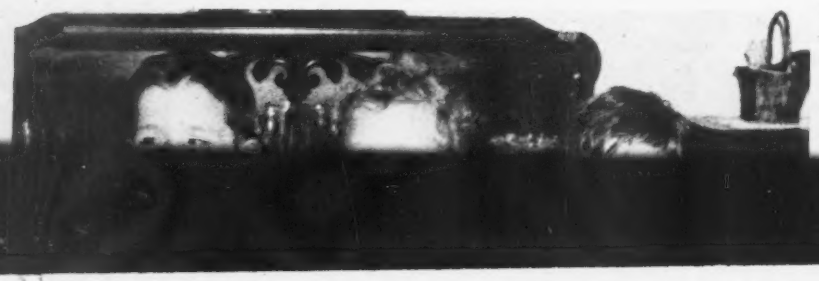
Said Dr. Arthur Ruggles, superintendent of the Butler Hospital of Providence: "Children should learn a better direction and control of their emotional activities, and an understanding of what ungoverned and misdirected emotional activities do to individuals, groups and nations."

Dr. Ruggles said that emotional disorders continue to be an increasing problem in public health. "In the US we have several millions of unemployed, as well as the highest divorce rate in the world producing emotional threats to countless parents and children."

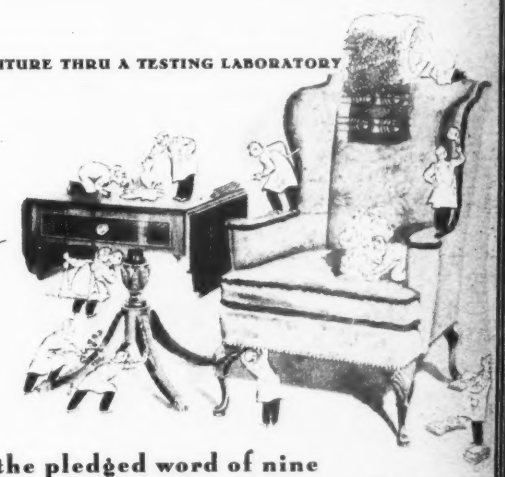
DR. WALTER CLARKE

He continued: "We still have far too many unstable men and women admitted to our teaching profession, and some of these work great havoc on the emotional structure of our children."

Dr. Ruggles told the Institute that recent progress in treatment of mental disorders holds promise for recovery in such cases, but he stressed that prevention as well as treatment amount to a challenge to community leaders.




You CAN'T PUT FURNITURE THRU A TESTING LABORATORY But



You can take the pledged word of nine competitive manufacturers for the quality of furniture you choose from the Grand Rapids Furniture Makers Guild

TRUE GRAND RAPIDS

POST'S

219 ASYLUM ST.—HARTFORD, CONN.

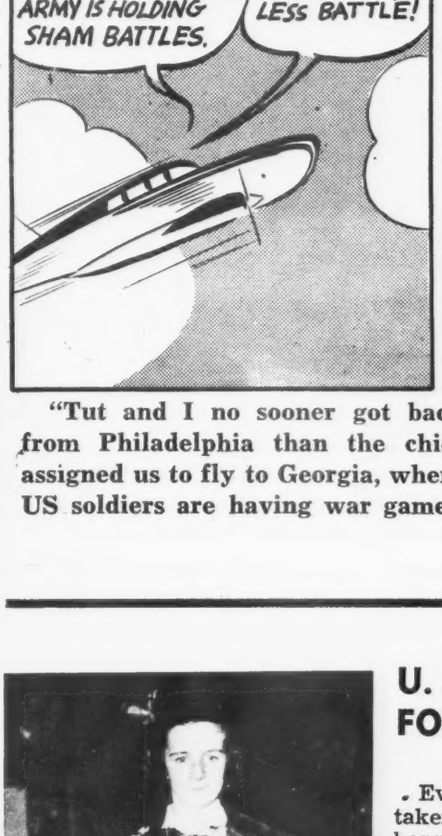
*"Exclusive Furniture for Ninety Years"*

"LOOK AT WHAT A MILLION USERS SAY!"

ENJOY THE LUXURY OF LOW-COST

ELECTRIC WATER

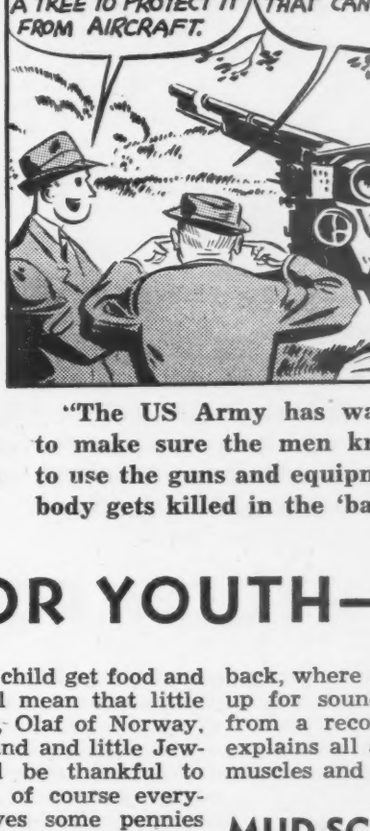
★ HEATING ★


WELL, TUT, HERE WE ARE IN COLUMBUS, GEORGIA, WHERE THE ARMY IS HOLDING SHAM BATTLES.
THAT'S WHAT THE WORLD NEEDS, MORE SHAM, LESS BATTLE!

"Tut and I no sooner got back from Philadelphia than the chief assigned us to fly to Georgia, where US soldiers are having war games.

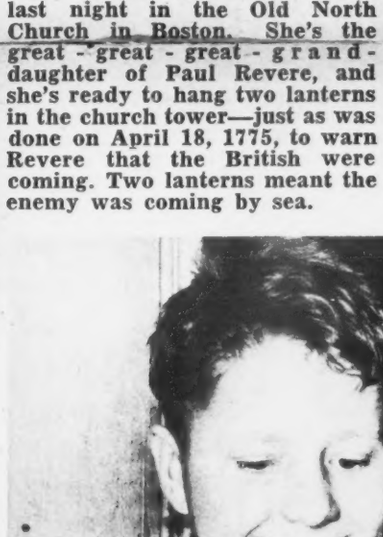
THE INFANTRY ARE USING THE SCATTERED, INDIAN STYLE OF FIGHTING.
FIGHTING FROM AMBUSH MIGHT BE GOOD MILITARY TACTICS BUT IT'S HARD ON US PHOTOGRAPHERS!

"The newest types of guns and tanks roll through the dusty Georgia clay, and high-speed warplanes roar through the warm air!




"The US Army has wa
to make sure the men kn
to use the guns and equipm
body gets killed in the 'ba

# NEWS FOR YOUTH—



## TWO LANTERNS

**Mary Louise Auberhamer, shown last night in the Old North Church in Boston. She's the great - great - great - grand-daughter of Paul Revere, and she's ready to hang two lanterns in the church tower—just as was done on April 18, 1775, to warn Revere that the British were coming. Two lanterns meant the enemy was coming by sea.**

## U. S. PENNIES FOR CHILDREN

*—IN EUROPE*

Everybody knows that war has taken the place of peace and happiness in many parts of Europe. A great number of the people who have been chased out of their homes are just little boys and girls who don't understand what the terrible thing is all about. Monday all the young people in the US will have a special chance to help these children.

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## STATE EMPLOYES PLAN THEIR MEET
### —ON SATURDAY

Bernard Kofsky, senior examiner at the Hartford office of the Connecticut State Employment Service, has been appointed chairman of the resolutions committee for the semi-annual convention of the Connecticut Labor Department Association to be held Saturday at Higgins Inn, Middletown.

Others on this committee are Harold E. Hills and Charles R. Rowe of the Central Office, Unemployment Compensation Division; William Lahey, Bridgeport; George Bernstein, Danbury; Joseph J. Ciccosanti, Thompsonville; and Vincent O'Meara, Torrington.

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## FIRE RECORD

From noon, April 18 to noon, April 19:

12:56 p. m. Rear 29 Hungerford St. Lint burning in dry cleaning machine. Slight damage.

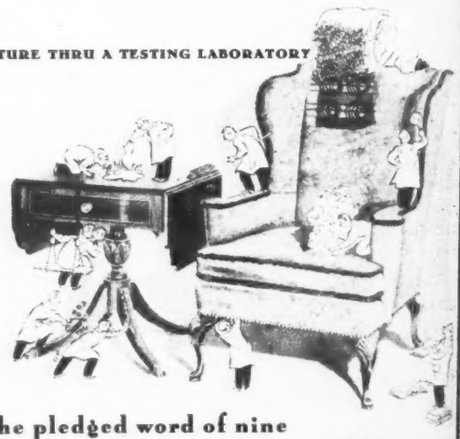
1:00 p. m. Block, 70 Henry St. Overflow of oil. Slight damage.

7:43 p. m. Box 81, Main and Capen St., AME Zion Church. 2051 Main St. Short circuit. Slight damage.

8:41 p. m. Shed, rear 835 Park St. Slight damage.

7:43 a. m. Jack the Tire Expert. 168 High St. Short circuit. No damage.


You CAN'T PUT FURNITURE THRU A TESTING LABORATORY



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© WDP

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★ HEATING ★

WELL, TUT, HERE WE ARE IN COLUMBUS, GEORGIA, WHERE THE ARMY IS HOLDING SHAM BATTLES.
THAT'S WHAT THE WORLD NEEDS, MORE SHAM, LESS BATTLE!
THE INFANTRY ARE USING THE SCATTERED, INDIAN STYLE OF FIGHTING.
FIGHTING FROM AMBUSH MIGHT BE GOOD MILITARY TACTICS BUT IT'S HARD ON US PHOTOGRAPHERS!
THERE'S ONE OF THE 75 MM. FIELD GUNS. IT'S PLACED UNDER A TREE TO PROTECT IT FROM AIRCRAFT.
I CAN'T HEAR A THING YOU'RE SAYING AND I HOPE I DON'T HEAR THAT CANNON, EITHER
COPR
ARMY
ISN'T THAT BOMBER A HONEY?
YEAH, A HONEY TO US BUT A HEADACHE TO THE ENEMY!

**"Tut and I no sooner got back from Philadelphia than the chief assigned us to fly to Georgia, where US soldiers are having war games.**

**"The newest types of guns and tanks roll through the dusty Georgia clay, and high-speed warplanes roar through the warm air!**

**"The US Army has war games to make sure the men know how to use the guns and equipment. Nobody gets killed in the 'battles.'**

**"Everybody is hoping President Roosevelt will visit the games while he's in Georgia."**

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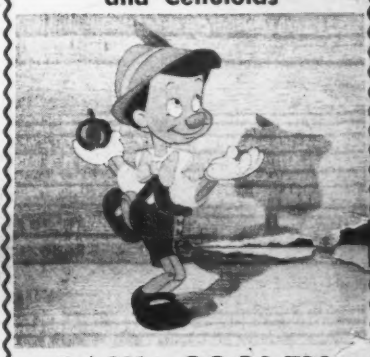

**PAUL COOLEY**

**THE MOYER GALLERY**

**252 TRUMBULL ST.**

**YESTERDAY TODAY TOMORROW**

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# —HEALTH & SCIENCE—

## 'QUACK CURES ARE INCREASING'
### —SAYS DISEASE EXPERT

Medical quacks, charlatans and unscrupulous druggists who are cashing in on US fear and ignorance about venereal disease were said today to be more prevalent than five years ago.

Dr. Walter Clarke, director of the American Social Hygiene Association, told the New England Health Institute this afternoon that a survey of 35 cities showed that 62% of the drug stores visited were willing to diagnose and sell some kind of "remedy" for syphilis or gonorrhea; 31% would not diagnose but did sell the quack cures. Only seven per cent of the drug stores refused to diagnose or sell.

Dr. Clarke suggested three ways of speeding up the control of US venereal disease: suppress the quack druggist, pass laws to stop the sale of unreliable remedies, educate the man in the street on the dangers of syphilis and gonorrhea.

Yesterday the Institute was told that if children were trained to understand and control their emotions, it would be a constructive step toward ridding the world of war.

Said Dr. Arthur Ruggles, superintendent of the Butler Hospital of Providence: "Children should learn a better direction and control of their emotional activities, and an understanding of what ungoverned and misdirected emotional activities do to individuals, groups and nations."

Dr. Ruggles said that emotional disorders continue to be an increasing problem in public health. "In the US we have several millions of unemployed, as well as the highest divorce rate in the world producing emotional threats to countless parents and children."

DR. WALTER CLARKE

He continued: "We still have far too many unstable men and women admitted to our teaching profession, and some of these work great havoc on the emotional structure of our children."

Dr. Ruggles told the Institute that recent progress in treatment of mental disorders holds promise for recovery in such cases, but he stressed that prevention as well as treatment amount to a challenge to community leaders.

**SCIENTIFIC TWINS ARE A WORRY**

**Here are Jimmy and Johnny—the much-publicized "scientific twins" who give headaches to scientists. These twin sons of Dennis Woods, a New York truck driver, have been studied since birth. Johnny (right) was given all sorts of special training to make him mentally superior to Jimmy (left). But Jimmy has just skipped one class ahead of his brother. They are shown with Sister Jane on their birthday yesterday.**

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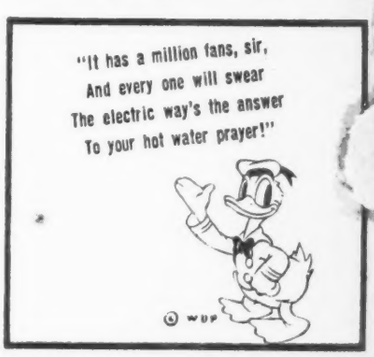


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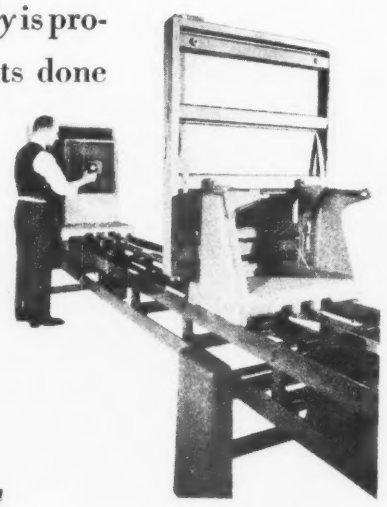
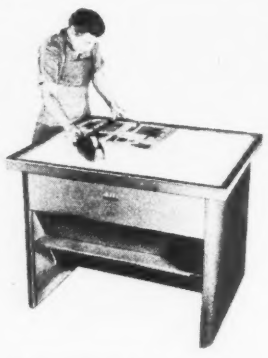
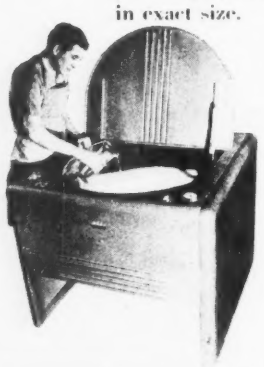
**THE PHOTO-OFFSET PROCESS** may be gibberish to you, but that's how your Hartford *Newsdaily* is produced. Briefly, here's how its done



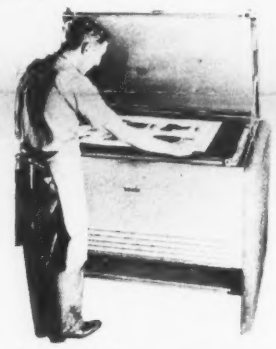
In the darkroom, news and pictures of Hartford and the world are photographed onto a piece of film, or negative.



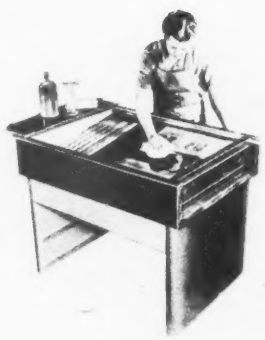
Like pieces of a puzzle . . . all the negatives for a printed page are assembled in exact size.



A grained metal plate is coated with a sensitizing solution in a "whirler."



Assembled negatives are transferred, exposed while flattened against the plate in a vacuum frame.



The photographic images are now on the sensitized plate and are developed and etched into the surface for printing.

The plates are put on the press cylinders

*"Let 'er roll!"*

# *Pioneers!*

## Congratulations Hartford!

Pioneering youth with advanced editorial ideas has brought to Hartford a nation's interest and respect. The Hartford *Newsdaily* is a world-wide *first* . . . so is the wisdom and courage of its founders.

The machinery which spun the ambitious dreams of Bice Clemow, et al into print...is another international *first*. So, with brains and daring, two pioneers in Hartford are making news by giving news in a thrillingly new way.

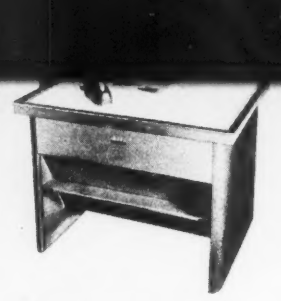
AMERICAN TYPE FOUNDERS

*Offset Division*

200 Elmora Avenue, Elizabeth, N. J.

*Branches and Agents in 24 Principal Cities*

# Congratulations Hartford!



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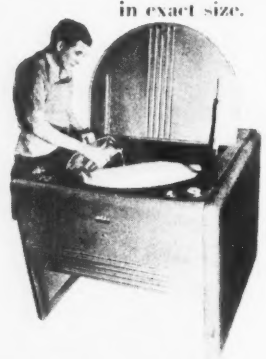
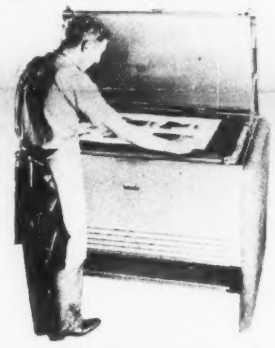


A grained metal plate is coated with a sensitizing solution in a "whirler."



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200 Elmora Avenue, Elizabeth, N. J.

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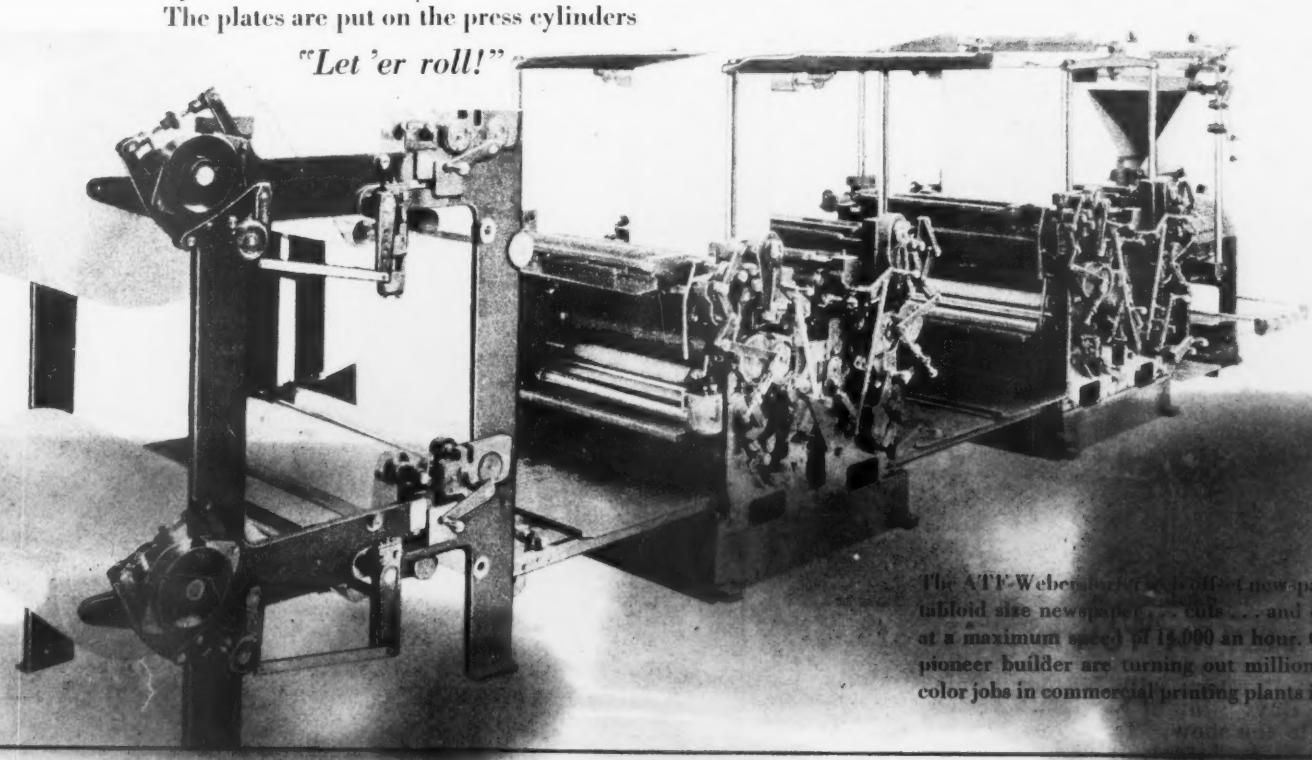
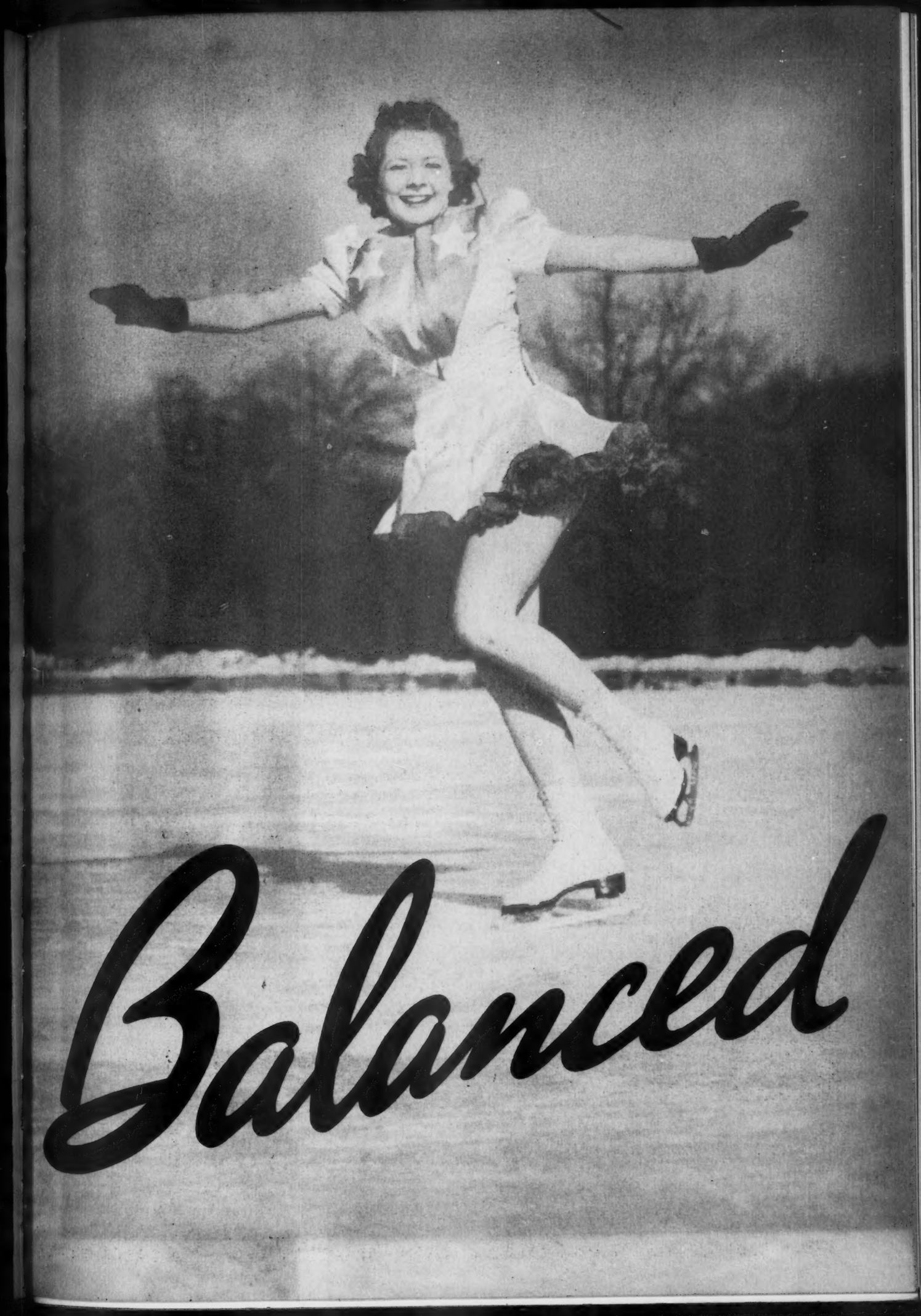
The plates are put on the press cylinders

*"Let 'er roll!"*



The ATF-Webendorfer offset newspaper press prints a 16-page tabloid size newspaper . . . cuts . . . and delivers the folded sheets at a maximum speed of 14,000 an hour. Other presses by the same pioneer builder are turning out millions of one, two, and three color jobs in commercial printing plants in all parts of the country.


Balanced

# VULCAN *Balanced* CYLINDER PACKING

## *insures better presswork*

Facing stiffer competition from other advertising media than ever before, newspapers today need every advantage of presswork quality that they can get. One such advantage is *better printing plates* — obtained by means of vacuum casting and other recent developments. Another advantage now available is Vulcan's BALANCED press blanket combination, which makes the most of better plates and at the same time effects substantial savings. ● To put it briefly, Vulcan's BALANCED cylinder packing is hard enough for sharp, clean printing, and resilient enough to compensate for normal surface variations in stereotype plates. Other advantages of these blankets, as reported by users in various parts of the country, are listed on the opposite page.

**VULCAN NON-FELT PRESS BLANKETS**

Originated, designed, manufactured and sold exclusively by the Vulcan Proofing Company

**COMPLETELY PROTECTED BY U. S. AND FOREIGN PATENTS**

# VULCAN PROOFING O

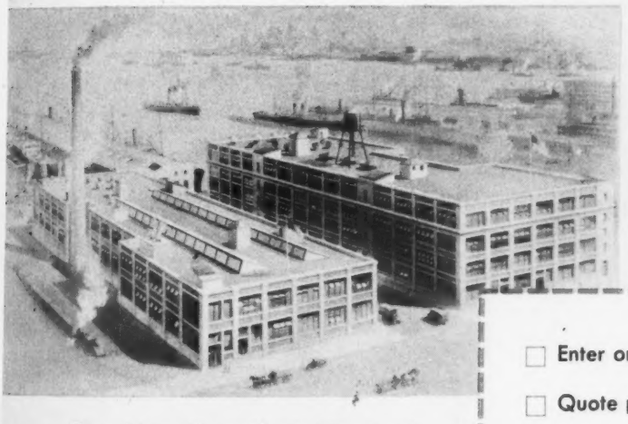
**FIFTY-EIGHTH STREET and FIRST AVENUE, BROOKLYN, N. Y. ● SALES REPRESENTATIVES**

**NO.67** **NO.76**

**NON-FELT TOP BLANKET** **CORK UNDERPACKING**

# *Features* OF VULCAN'S NON-FELT PRESS BLANKET COMBINATION

1. Smooth-as-glass printing surface, adjusted to meet the requirements of the average stereotype plate.
2. Absolutely oil-proof.
3. A fresh printing surface for every run. No bolstering. No ghosting. No indentations of any kind, even if plates are left on the press overnight.
4. No creeping on the cylinders . . . because of the way these blankets are made – plus the type of fabric used – plus the fact that they are properly squared up at the factory before shipment.
5. Vulcan-made throughout, under constant laboratory control.
6. Uniform thickness. Maximum variation is only .002".
7. Particularly good for picture pages, small type, and heavy solids.
8. Vulcan's exclusive cork compound will not take a permanent set. It maintains its uniformity of thickness indefinitely.
9. First-cost is little more than that of a draw-sheet combination; and the over-all cost per million impressions is substantially lower.



**Brooklyn, New York, Plant of the Vulcan Proofing Company**

**MAIL THE ATTACHED CARD FOR MORE PARTICULARS**

☐ Enter order for
☐ Quote price on **VULCAN PRESS BLANKETS**

| | QUANTITY | WIDTH | LENGTH | GAUGE | FLAP |
|---|---|---|---|---|---|
| Non-Felt Top Blanket | ..... | ..... | ..... | ..... | ..... |
| Cork Underpacking | ..... | ..... | ..... | ..... | |

We expect to reblanket about (Date).....

Types of Presses.....

Signed By.....

☐ Send more particulars about Vulcolastic Rollers

Newspaper.....

City.....

**OMPANY**

**PRESENTATIVES IN ALL PRINCIPAL CITIES**

# Another Big Help for Better Presswork

# VULCAN VULCOLASTIC ROLLERS

VULCAN VULCOLASTIC ROLLERS contain no rubber whatever. They are therefore free from deterioration due to oil. Furthermore, these rollers are literally only half as hard as rubber rollers, with a laboratory test reading of 20 as compared with 40 for rubber. This makes possible a very light setting against the printing plate, with many resultant advantages as listed below. In halftone work, only the surface of the dot is inked — not the sides — which means cleaner printing of pictures; and the same feature promotes better printing of type matter, rules, and line cuts.

Vulcan Rollers are the only so-called "synthetic" rollers that are really suitable for modern high-speed presses as well as for older and slower units. Write for names of users in your vicinity.

## Other Features

1. Efficient and uniform distribution of ink—at all speeds.
2. Unaffected by heat, cold, or humidity, or by sudden changes of temperature.
3. Durability. Some Vulcolastic Rollers are starting their eighth year of good service.
4. Less resetting. Some users run for two years and more without resetting.
5. Easier to set and the setting is lighter. Hence . . . no roller jumps, better printing, less ink consumption and less wear.
6. Regrinding of Vulcolastic Rollers—at long intervals—is only a polishing operation.
7. Users report less spraying of ink as compared with other rollers.
8. Made under constant laboratory control.
9. Finally, in case of fire Vulcolastic Rollers will not support combustion. Some newspapers today are refusing to buy rollers which do not have this characteristic.

All of which means, for the pressroom, less trouble; for the front office, lower costs; and for all concerned, BETTER PRESSWORK.

**MAIL THE ATTACHED CARD FOR MORE PARTICULARS**

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

**BUSINESS REPLY CARD**
First Class Permit No. 1844, Sec. 510, P. L. & R., NEW YORK, N.Y.

**VULCAN PROOFING COMPANY**
**FIFTY-EIGHTH STREET & FIRST AVENUE**
**BROOKLYN, NEW YORK**

# *Your best coupler is*
# CHAMPION PAPER

It transmits the power of a good sales story to the logical market for the things folks have to sell. For the big pull of business, advertisers large and small find good literature an indispensable part of every advertising program. And they recognize Champion as the best line from which to choose a suitable grade of coated or uncoated paper, envelope, offset, postcard, or cardboard. Your customer always keeps steam up with enthusiastic sales ideas and copy. It's part of your job and ours to pull out the throttle and give him an actual demonstration of how good advertising on Champion paper pulls in profitable business.

**THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio**

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

*Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day*

*DISTRICT SALES OFFICES*

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI

# WHY DOESN'T OUR NEWSPAPER ADVERTISING PRINT BETTER?

## This new BOOK may give you the answer

Here's the experience of the oldest newspaper ad plate specialists in the country—yours for the asking.

**THE RAPID WAY talks about the newspaper side of**

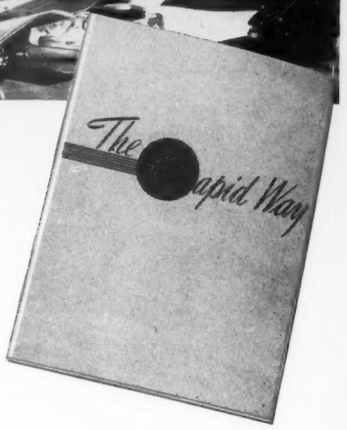
PHOTOGRAPHY • ARTWORK • ENGRAVING • TYPOGRAPHY • LOCKUP

in an authoritative, technical manner. A chapter on each process discusses the manner in which that process can affect the quality of the final newspaper reproduction of the advertisement.

The book is based on Rapid's own experience, plus the result of extensive research in the other foregoing fields to determine what can be done to improve newspaper printing of national advertising.

The parts of the book already released met with great approval. Now, it is being offered to the newspaper advertising field as a complete working tool.

Rapid has believed for some time that something should be done to help the advertiser protect his half-billion-dollar yearly investment in newspaper space. This book is the answer!




*A forty-page, case-bound handbook for the improvement of newspaper advertising reproduction*

*You may reserve your copy at Booth 77 at the ANPA Mechanical Conference or write*

# THE RAPID ELECTROTYPE COMPANY

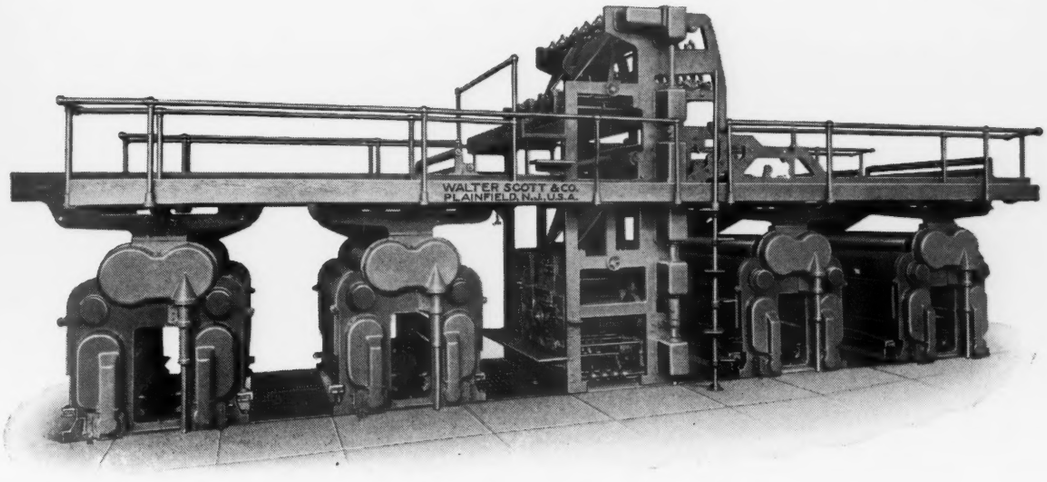
**CINCINNATI, OHIO**

# *The New York* HERALD-TRIBUNE

**will soon install**

***The Latest Improved..*** **SCOTT**

## Straight-Unit Octuple Press




**THIS press, like the new Scott Double Octuple Press now in operation in the Miami Daily News, will have all our latest Engineering Advances — Greater Rigidity, Smoother Operation, Hardened, Ground and Lapped Gears of extraordinary strength and durability, extreme Quietness of Operation, Automatic Lubrication in oiltight housings. . . .**

***Be sure your next Press Purchase is of the Latest Modern Design originated by***

**SCOTT**

**WALTER SCOTT & CO.** **PLAINFIELD NEW JERSEY**

A straight line is the shortest distance between two points, and we are therefore happy to announce, (and effective immediately) that Dayco "Stayput" and Dayco "H.S." Solid Rubber Rollers, made especially for newspapers, will be distributed direct by The Dayton Rubber Manufacturing Company.

Don't forget that Daycos ease the deadline jitters by delivering "on time" editions with no time out for changes or adjustments.

In addition to unusual durability, Daycos have the right consistency and affinity for properly distributing and depositing ink. With Daycos, presses can run at top speeds under any climatic condition. They are ink and wash-resisting. There is no ink penetration—no soft spots—no blisters. They can be stored indefinitely wtihout deteriorating.

Let one of our sales engineers give you details showing how Daycos are saving time, money and trouble for large and small newspapers.

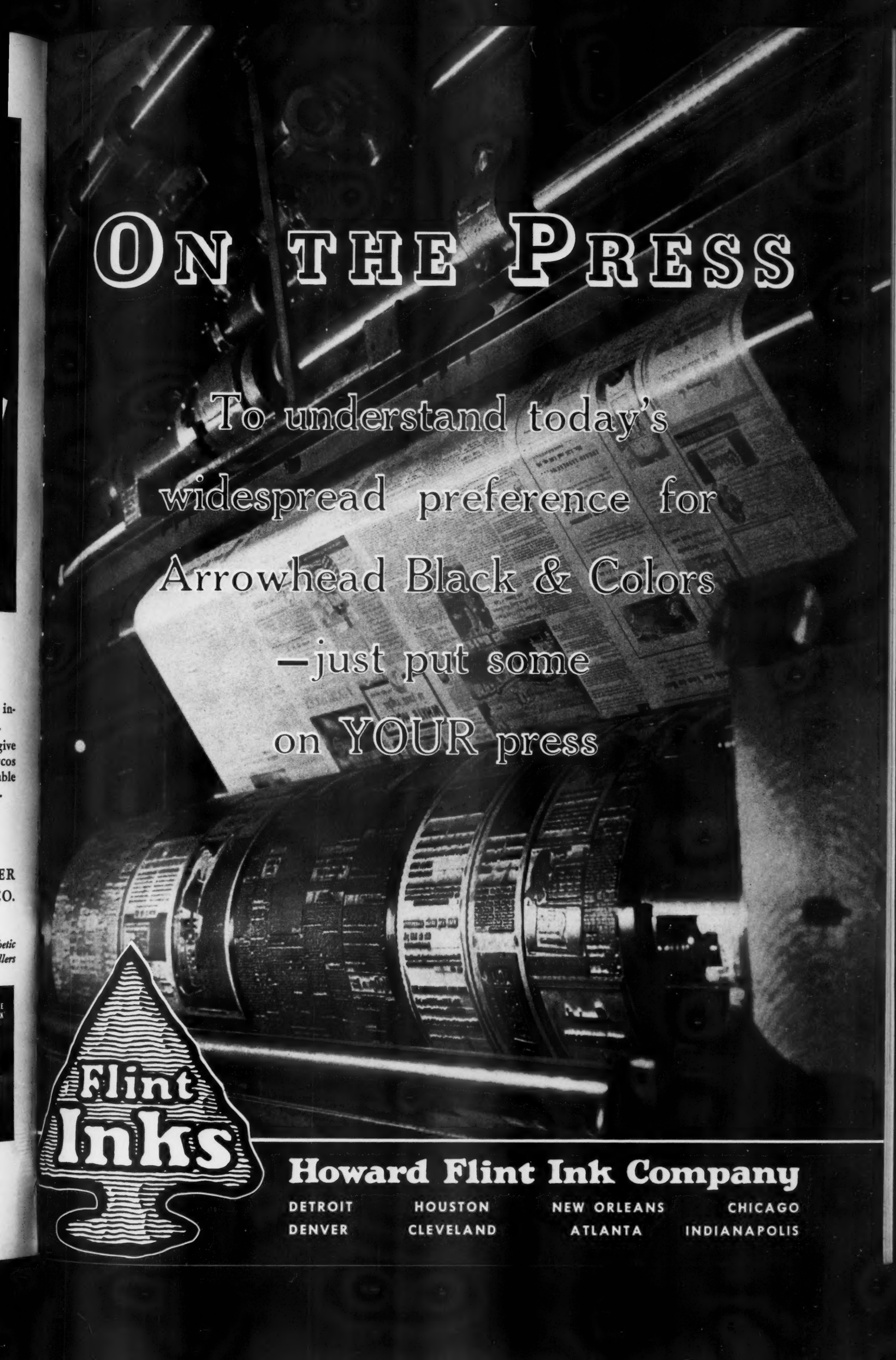
**COME IN AND SEE US AT**
**BOOTH 36**
**THE A.N.P.A. EXHIBIT**
**DRAKE HOTEL, CHICAGO**
**JUNE 10, 11, 12**

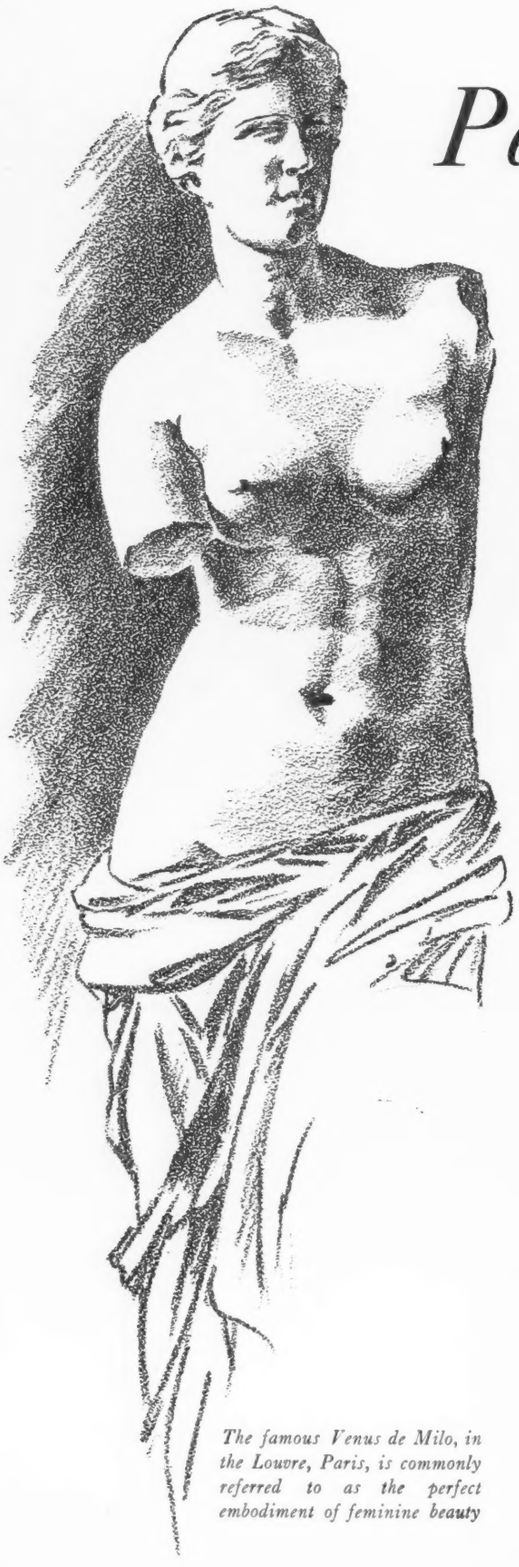
*MANUFACTURED AND DISTRIBUTED BY*

THE DAYTON RUBBER MANUFACTURING CO.
DAYTON, OHIO

*The Originators and Pioneers of Synthetic Rubber Printing and Lithographic Rollers*

DAYCO "H.S." SOLID RUBBER ROLLERS
Dayco Rollers
THE ORIGINAL AND PIONEER SYNTHETIC RUBBER PRINTING AND LITHOGRAPHIC ROLLERS
DAYCO "H.S." SOLID RUBBER ROLLERS
D
DAYCO "STAYPUT" ROLLERS
COPYRIGHT 1940, THE DAYTON RUBBER MFG. CO.
DAYCO BASE WITH SYNTHETIC RENEWABLE SURFACE CAN BE APPLIED TO ANY METAL STOCK
PATENTED
DAYCO "STAYPUT" ROLLERS


ON THE PRESS
To understand today's
widespread preference for
Arrowhead Black & Colors
—just put some
on YOUR press
Flint
Inks
Howard Flint Ink Company
DETROIT HOUSTON NEW ORLEANS CHICAGO
DENVER CLEVELAND ATLANTA INDIANAPOLIS



*The famous Venus de Milo, in the Louvre, Paris, is commonly referred to as the perfect embodiment of feminine beauty*

# *Perfect Face... Perfect Body*

PERFECTION, in the exact sense of the word, may not exist — either in feminine pulchritude or in the more prosaic matter of PRINTING PLATES. But printing plates today are being made so accurately — both as to face and body — that some newspapers do not hesitate to call them PERFECT.

These are the newspapers which are using . . .

1. Autoplate VACUUM Equipment, which produces the perfect face; and
2. The Wood Heavy-Duty Autoshaver, which produces the perfect body.

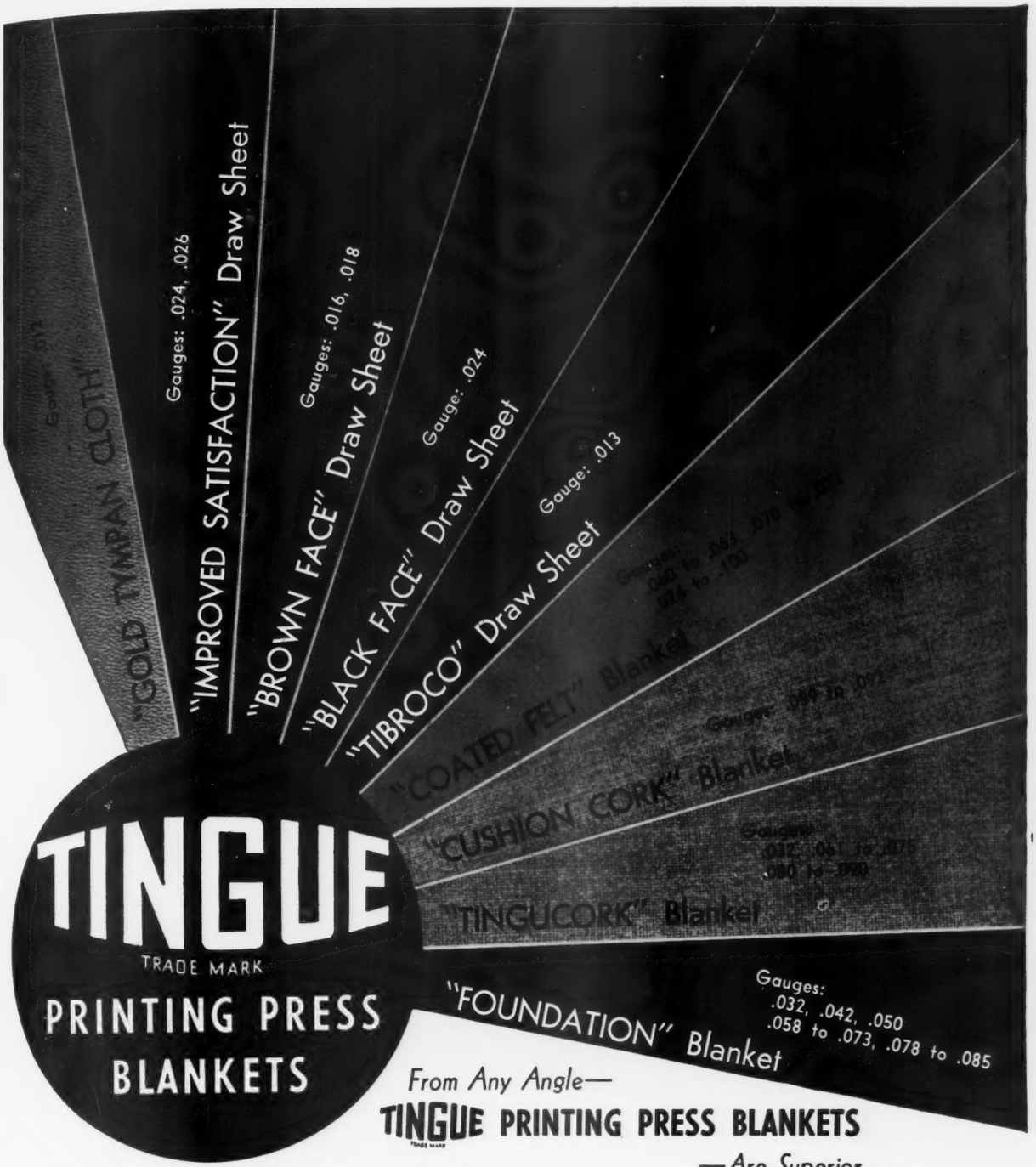
VACUUM EQUIPMENT is available for all Autoplate machines now in service — Pony, Junior, and Automatic — as well as on new machines. It insures the production of better and truer printing plates, with no loss in the operating efficiency of the machine. The net results are: Sharper and more uniform cuts and type matter. Blacker solids. Elimination of light spots due to buckles in the mat. Elimination of mat creeping and pulldowns.

THE WOOD HEAVY-DUTY AUTOSHAVER is designed for the handling of stereotype plates of super-quality on a mass production basis. Weighing considerably over a ton more than the Standard Autoshaver, this new heavy-duty machine will stand up under the most severe service. Both roughing and finishing cuts are employed in shaving each plate; and plates can be shaved a second time without removal from the arch — a very advantageous procedure on open-ad plates. The Heavy-Duty Autoshaver has the same over-all dimensions as the Standard Autoshaver, and can be installed in the same location with no rearrangement of stereotype room equipment.

For plates with a perfect face and a perfect body, investigate Autoplate Vacuum Equipment and the Wood Heavy-Duty Autoshaver. Bulletins on request.

## WOOD NEWSPAPER MACHINERY CORPORATION

**PLAINFIELD, NEW JERSEY • NEW YORK OFFICE: 501 FIFTH AVENUE**




*From Any Angle—*

**TINGUE PRINTING PRESS BLANKETS**

*—Are Superior . . . . . .*

Stocked in gauges listed above.
Special gauges made to your requirements.

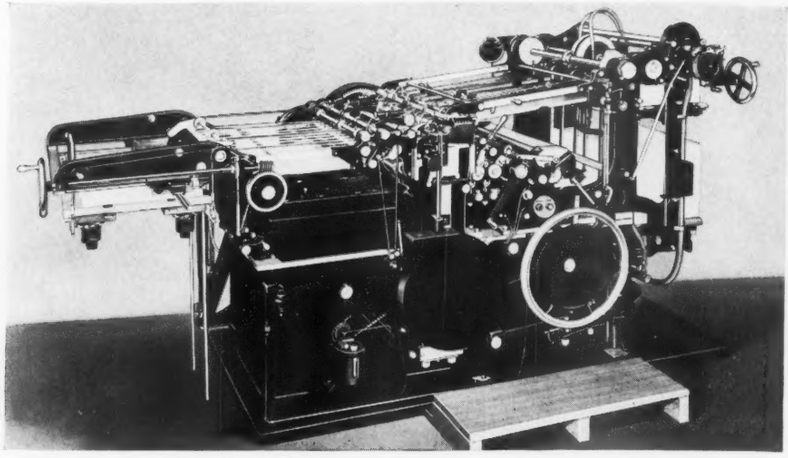
# TINGUE, BROWN & CO.

114-120 East 23rd St. NEW YORK, N.Y.

1227 Wabash Ave. CHICAGO, ILL.

723 East Washington Blvd. LOS ANGELES, CAL.

*Canadian Sales Agents:* ROSS WHITEHEAD & CO., LTD., Montreal, Canada



# ATF 17×22 KELLYS

## *carry the profitable load*

## *in hundreds of pressrooms!*

Because the ATF 17x22 Kelly takes a wide range of popular sizes at high speed, hundreds of printers are making the most of it . . . earning extra profits on its ability to print a full 17x22 sheet *plus* bleed. In addition to their 11x17 and 8½x11 jobs, they print complete 16-page books 5½x8½ eight-up work-and-turn, and many other sizes in profitable combination runs. • Use the ATF 17x22 Kelly for quality . . . for run-of-the-hook work. Its ability to get away quickly and run without "babying" helps the profit margin on any job . . . whether long or short runs. Modernize with ATF 17x22 Kellys . . . get a better profit break and increase the scope of jobs you can handle. Ask your ATF Salesman for a press sheet . . . or write to your nearest ATF office.

## American Type Founders

200 Elmora Avenue, Elizabeth, N. J. · *Branches in Principal Cities*

•

Other famous ATF Presses: No. 2 Kelly, No. 1 Kelly
Kelly Clipper, Little Giant
and ATF-Webendorfer Offset Presses

Types used: Ultra Bodoni Italic and Bulmers

NEWS INK AT WORK
1
2
BELGIUM
Opportunities in fashionable hotels, clubs, apartment hotels; splendid salaries; previous experience proved unnecessary; quality for well paid position at once in spare time. National Placement Service free of extra charge. Write today for free
3
4
5
6
SPARKLING BURGUNDY
1.89 26 oz.
"Faiveley." Delicious sparkling wine imported from France. Treat for connoisseurs.

# 6 Important Points in Quality News-Printing -*Protect Them with* MORRILL INK SERVICE

**1–Solids with punch, brilliant and clear . . .**

**2–Big-type headlines clean-edged—with high density . . .**

**3–Tiny text with every e-loop open . . .**

**4–Massive halftones fine-detailed as an etching . . .**

**5–Portrait cuts sparkling with vivid contrast . . .**

**6–Surprinted type cameo-sharp on its halftone background . . .**

QUALITY news-printing to modern standards can't be left to chance. It must be **engineered** . . . from the ink chemist's laboratory to your ink fountains and onto your pages. The right ink and service play a most important part in printing excellence, as many publishers realize.

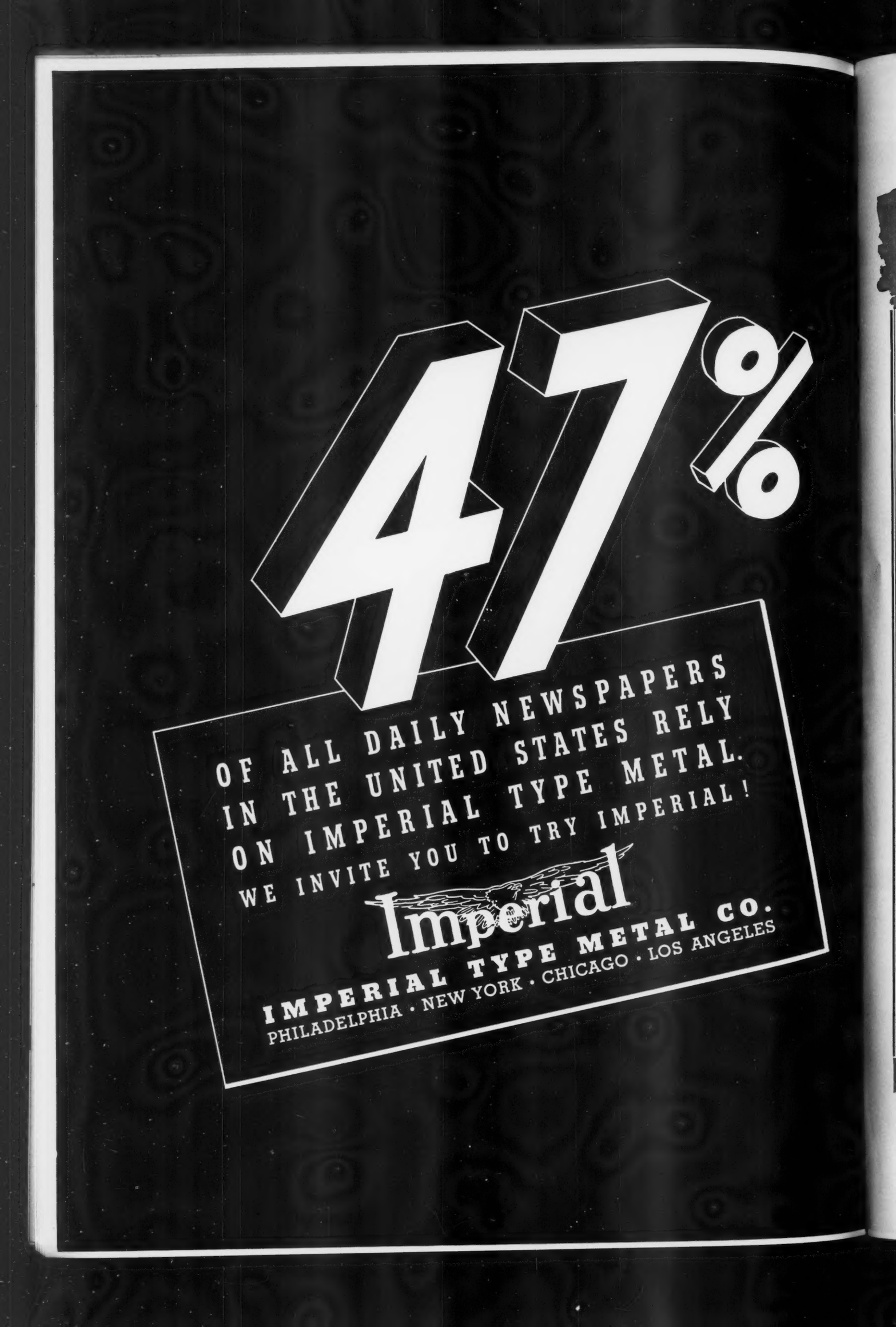
Let MORRILL — news-ink leader for 100 years — show you the newest developments in finer news inks. Get the benefits in reader-preference and advertising leadership which modern reproduction is bringing to so many newspapers.

Ask the Morrill Service Man to point out what today's Morrill Inks can do for your paper. Call him in. There's a Morrill branch near you.

*Inks by*
THE WORLD'S LARGEST MAKER
**MORRILL**

*Write or wire for the* **MORRILL SERVICE MAN**

**GEO. H. MORRILL CO.**
DIVISION
GENERAL PRINTING INK CORPORATION
**100 SIXTH AVENUE • NEW YORK, N. Y.**
**FACTORIES**
NORWOOD, MASS. • TACONY, PHILA., PA.
CHICAGO, ILL. • SAN FRANCISCO, CAL.
**BRANCHES**
BOSTON • NEW YORK • PHILADELPHIA • DETROIT
CHICAGO • ST. LOUIS • MINNEAPOLIS • FT. WORTH
LOS ANGELES • SAN FRANCISCO • SEATTLE


47%
OF ALL DAILY NEWSPAPERS
IN THE UNITED STATES RELY
ON IMPERIAL TYPE METAL.
WE INVITE YOU TO TRY IMPERIAL!
Imperial
IMPERIAL TYPE METAL CO.
PHILADELPHIA · NEW YORK · CHICAGO · LOS ANGELES

HUBER

# VELO COLD SET INK

## AND PRINTING PROCESS

(PATENTS PENDING)

## THE FASTER THE PAPER TRAVELS THE FASTER VELO INK SOLIDIFIES

So instantaneously does Velo Cold Set Ink solidify that printing speeds are limited only by the top speed at which the web can be run.

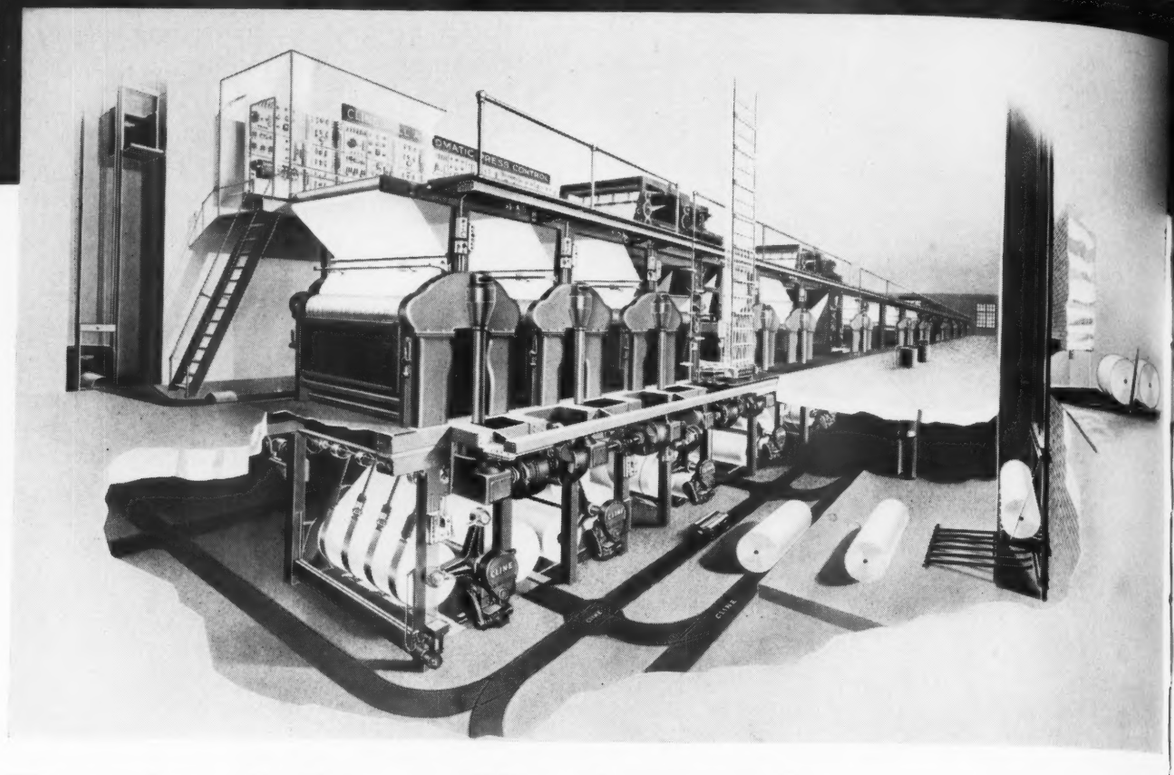
Velo Cold Set Ink at ordinary temperatures is *naturally the solid* which other inks approach as they dry. By the application of low-temperature heat (approximately 200° F.) to the press—ink fountain, metal rollers, and plate cylinder—the solid ink is made fluid... only to solidify again instantly upon touching the cool (room temperature) paper.

Hence it is true that the faster the paper travels, the faster Velo Ink solidifies, for it is removed that much quicker from the liquefying heat of the printing plate.

Furthermore, no offset webs are needed... there is no penetration of ink into even the most absorbent papers, and fine-screen halftones can be printed on rough, absorbent stocks... no washups are needed except to change color, for the plates are left clean after each impression... the lead of the web through the press is not changed, and the paper is not subject to stretching, shrinkage or strain... fire and health hazards are eliminated.

Additional information on Velo rotary press printing will be mailed at your request. Write J. M. Huber, Inc., 460 West 34th St., N. Y. Branch offices in Chicago, St. Louis, Boston. Dealers in principal cities of the U. S. A. and foreign countries.

HUBER PRODUCTS HUBER INKS IN USE SINCE 1780



# Typical Installation of CLINE Equipment Including:

- UNIT TYPE MOTOR DRIVES
- REELS, TENSIONS and PASTERS
- CONVEYORS—ROLL HANDLING EQUIPMENT
- PLATE CONVEYORS

## CLINE SYSTEM UNIT TYPE PRESS DRIVE and AUTOMATIC TENSION

An Individual Motor Drives Each Unit and Each Folder in Any Combination

No Press Drive Shaft — No Back Lash

Perfect Acceleration — Perfect Slow Down

Perfect Automatic Brake

No Running Belts — Plenty of Room

Automatic Tension Control, Adjustable From Press Room, Tension Indicated on Dial

No Overrun of Rolls, Quick Stop from High Speed

PURCHASE

CLINE · WESTINGHOUSE

AND BE SURE YOU'RE RIGHT

# CLINE

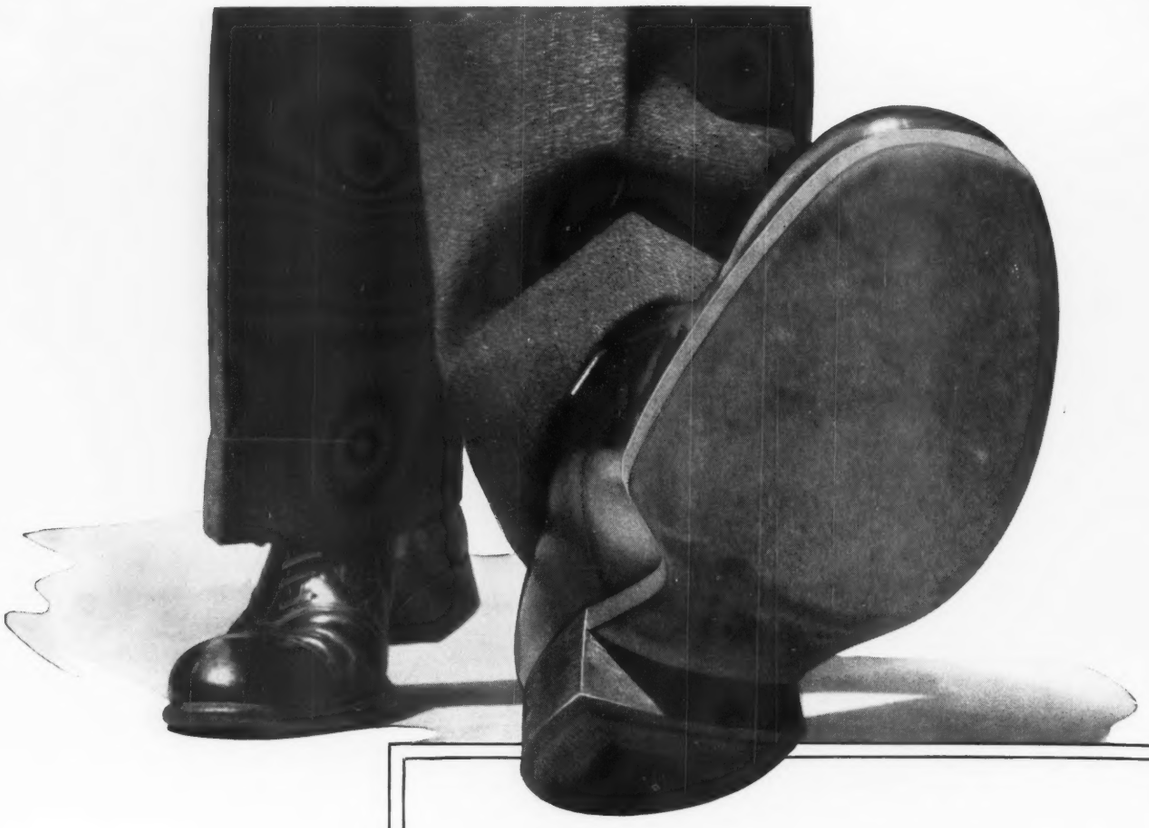
## FULL SPEED PASTERS

- Press one button to complete the paster and tail cutoff
- Even tension maintained during paster cycle
- No driven belts
- No apparatus in operator's way
- Increase production—improve printing
- Save waste
- Simple to maintain—simple to operate
- Low first cost

for

NEWSPAPER PRESSES
ROTOGRAVURE PRESSES
MAGAZINE PRESSES

CLINE ELECTRIC MFG. CO.
NEW YORK CHICAGO SAN FRANCISCO
TELL US YOUR PROBLEMS
OUR ENGINEERS HAVE THE EXPERIENCE AND FACILITIES TO SERVE



## Another Step *FORWARD*

The A.N.P.A. Mechanical Convention marks the close of another year of progress and achievement - another step forward in the field of newspaper reproduction. You who attend will want to talk things over - to discuss problems - to swap ideas with the boys. And we believe you'll find our suite at the *DRAKE* Hotel a mighty good place to get together.

**BURGESS**
**CELLULOSE COMPANY**
Manufacturers of Chrome and Tone-Tex Mats
**FREEPORT ILLINOIS**

A Laboratory Product
BURGESS Chrome MATS

THEY FOUND GOLD—
WHERE THERE WAS ORE

# You'll find Offset wherever there's Business

Printing is just another way to say: "putting ink on paper."

But like recovering the rich ore for gold, there are different methods. Some ore could never be recovered by "panning." Likewise there are "printing" jobs still left undone because of limitation of printing methods in the plant.

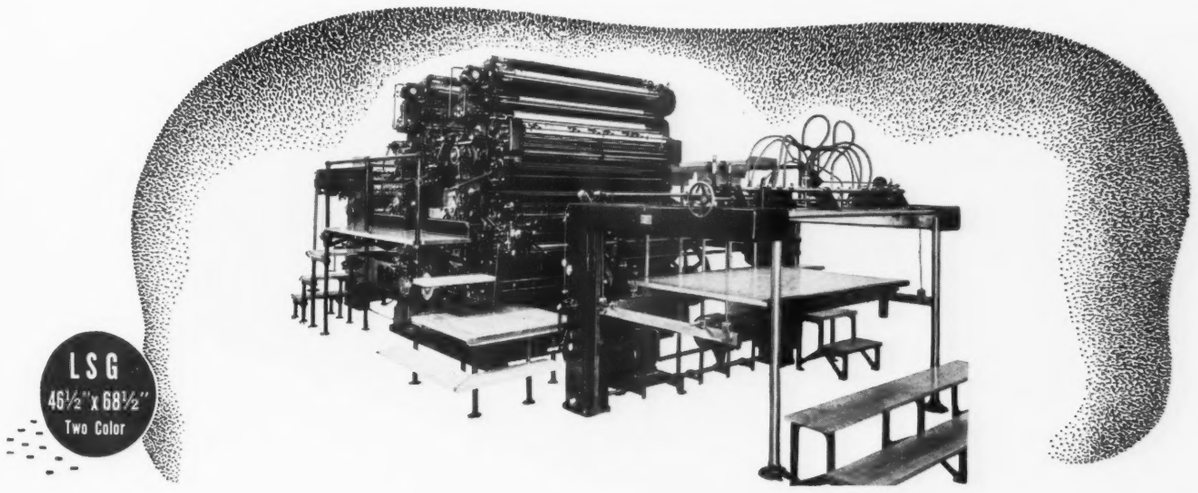
Many of these yet undone jobs can be produced by offset and many jobs done by other methods can be better done by offset.

Actually, wherever there is business there is need for offset.

Wherever there is offset there is also need for Harris in the pressroom. When you take the name Harris to your customer you take the synonym "for quality offset production."

**LITHO CHEMICALS**

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.




HARRIS OFFSET PRESSES

HARRIS · SEYBOLD · POTTER · COMPANY

*General Offices:* 4510 E. 71st Street, Cleveland, Ohio. *Harris Sales Offices:* New York, 330 W. 42nd Street; Chicago, 343 S. Dearborn Street; Dayton 819 Washington Street; Atlanta (Harris-Seybold-Sales Corp.), 120 Spring St., N.W.; San Francisco, 420 Market Street. *Factories:* Cleveland, Dayton.

# Tone Control

## Ideal Rollers produce a perfect symphony

The skillful application of tone values, from heavy solids to the most delicate of pastel shades, is easily accomplished with these scientifically perfected rollers. Ideal Rollers perform in perfect harmony with plates, ink and paper to transfer illustration, type and design attractively and realistically to your sales message.

IDEAL PROCESS ROLLERS consist of an extremely soft and durable base roller plus a removable glue-glycerine coating. Bases are lathe-ground for precision and the coating is uniform, permitting the lightest possible setting. These rollers will not shrink, expand or melt. Our new small coating machine makes this large-shop process available for the first time to printers who have batteries of small high-speed presses. For cool operation, increased production, reduced spoilage, roller economy and time-saving on resetting, use Ideal Process Rollers. They produce uniformly high quality work!

IDEAL TYPOGRAPHIC DISTRIBUTORS are made of vulcanized vegetable oils. They are ground true to specification and hold their diameter throughout their life. Will not melt, shrink or swell. Have a true affinity for printing inks. An all-year-round roller for many years. The best roller on the market for color changes.

IDEAL GRAPHIC GUARANTEED NON-MELTABLE ROLLERS are made soft and stay soft in order to give you better printing results. They retain their surface tack, pick up and distribute ink evenly and require less resetting than regular composition rollers. Special compounds available for coating and varnishing.

IDEAL SYNTHETIC ROLLERS are soft, cool-operating precision inking rollers for linseed-base printing on high-speed presses. Made from compounds which have been proved in field tests and actual production. Rollers are strongly bonded to metal cores and are covered with an unusually tough and pliable formula of proper softness to afford excellent printing results.

*It's no longer a problem to choose the proper roller for your pressroom. Order Ideals! There's an economical and dependable Ideal Roller to serve your every purpose.*

•

*INQUIRE ABOUT OUR FULL LINE OF SYNTHETIC ROLLERS*

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

**IDEAL ROLLER & MFG. COMPANY** CHICAGO, ILLINOIS LONG ISLAND CITY, N.Y.

*Sales offices in the principal cities* • Canadian Agents: Sinclair & Valentine Company of Canada, Ltd., Toronto

# THE *New* DUPLEX TUBULAR VACUUM CASTING BOX

## FOR BETTER PLATES —BETTER PRINTING

Preston Grandon — Publisher, LaSalle, Ill. *Post-Tribune,* says—

"The plates can be worked faster in the new Tubular Vacuum Box.

Much less water is used. Elimination of buckling and sinks in borders, cuts, etc., is particularly noticeable. The suction of the vacuum holds the mat against the box, smoothing it out and making the plates much more uniform.

The box is heavier, more substantially built, and a great improvement in every manner.

It is a time saver, in addition to an assurance that the plates will be better and much more uniform than was possible before."

## THE TUBULAR VACUUM CASTING BOX HAS BEEN PURCHASED BY

LaSalle, Ill. — *Post-Tribune*
Zanesville, Ohio — *News*
Cleveland, Ohio — *Shopping News* — Two
Racine, Wisc. — *Journal-News*
Lawrence, Kans.—*Kansas Color Press*
Charlottesville, Va. — *Progress*
Augusta, Me. — *Kennebec Journal*
Owensboro, Ky. — *Inquirer*
Paducah, Ky. — *News-Democrat*
Buffalo, N. Y. — *Everybody's Daily*
Battle Creek, Mich. — *Enquirer-News*
Buffalo, N. Y. — *Saxer & Pfeiffer*
Madras, India — *Hindu*

*Write for Particulars and Description*

**THE DUPLEX PRINTING PRESS COMPANY**
**BATTLE CREEK, MICHIGAN**

We don't mean to claim that VULCAN ROLLERS will give you more time for fishing . . . or for whatever pastime you like best. But we do claim that VULCAN ROLLERS, like VULCAN PRESS BLANKETS, will save you a lot of trouble . . . give you better presswork . . . and reduce your pressroom costs. Write for full particulars and recommendations.

**VULCAN PROOFING COMPANY**
**First Avenue and Fifty-Eighth Street, Brooklyn, New York**
*Sales Representatives in Principal Cities*

# VULCAN

### *Features of* VULCAN Inking Rollers

**1.** Freedom from roller troubles due to oil. Vulcan Vulcolastic Rollers contain no rubber whatever. No swelling, no lipping up at the ends.

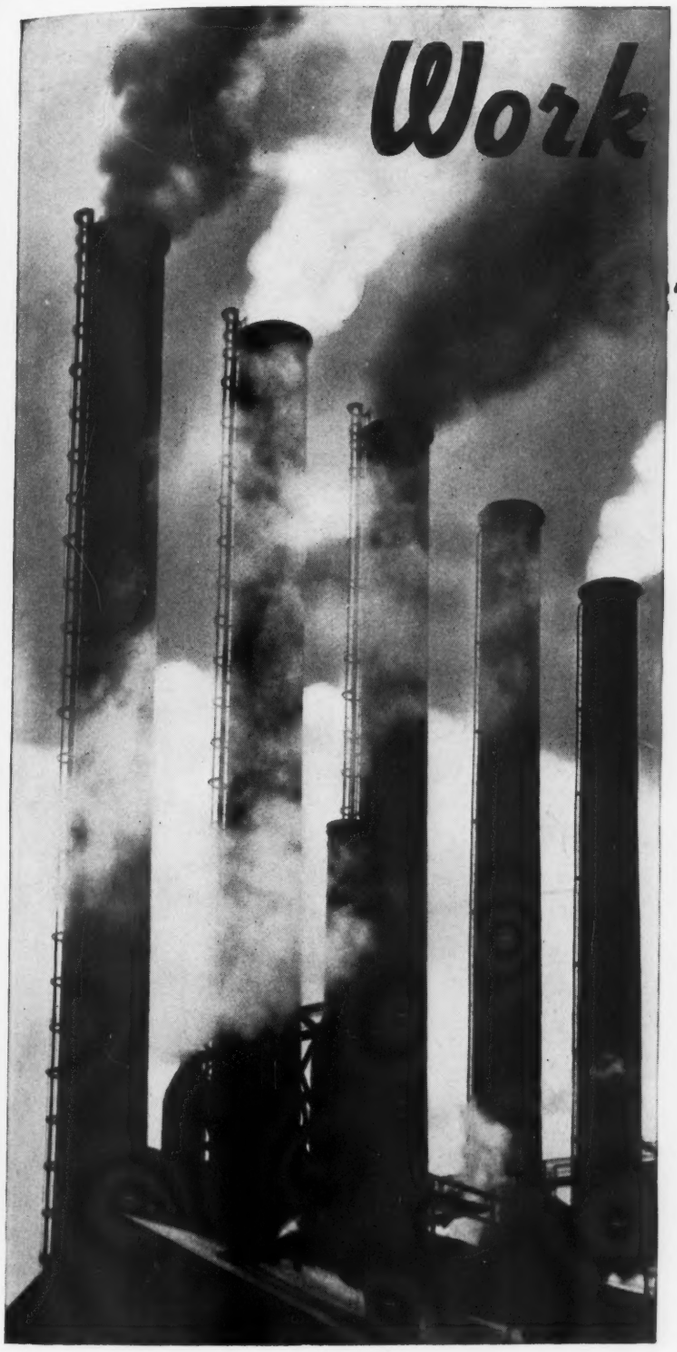
**2.** Vulcan Vulcolastic Rollers need very little resetting or regrinding. The latter, with Vulcan Rollers, is merely a polishing operation.

**3.** Vulcan Vulcolastic Rollers are literally only half as hard as rubber rollers. This means a light setting against the plate . . . prevents roller jumps . . . promotes good distribution.

**4.** Incidentally, Vulcan Vulcolastic Rollers will not support combustion. Some newspapers today are refusing to buy rollers which do not have this feature.

### *Investigate* VULCAN Press Blankets

Have you heard about Vulcan's BALANCED press blanket combination? We refer to the No. 67 oil-proof top blanket and the No. 76 cork underpacking. This combination is firm enough to insure good presswork, with plenty of "comeback" to compensate for normal variations in stereotype plates. See insert in Printing Equipment Engineer's special Convention issue.



# Work in Process at GOSS

*Counting Everything . . .*

## The Current Total Is

# 119 UNITS

## 19 PAIRS OF FOLDERS

**NEW YORK NEWS . . . 16 High Speed Anti-Friction Units, 3 Pairs of Folders**

**CHICAGO TRIBUNE . . . 7 High Speed Anti-Friction Units, 1 Pair of Folders with 1 Color Unit**

**CHICAGO TIMES . . . 6 High Speed Anti-Friction Units, 1 Pair of Folders**

**JOHNSTOWN (Pa.) TRIBUNE . . . 5 High Speed Anti-Friction Units, 1 Pair of Folders**

**BUFFALO EVENING NEWS . . . 4 High Speed Anti-Friction Units, 1 Pair of Folders**

**DES MOINES REGISTER-TRIBUNE . . . 4 High Speed Anti-Friction Units, 1 Pair of Folders with 2 Color Units**

**LEXINGTON (Ky.) LEADER . . . 1 High Speed Anti-Friction Unit**

**MINNEAPOLIS STAR-JOURNAL . . . 8-Cylinder Multi-Color Press with 1 Pair of Folders**

**KABLE BROS., Mt. Morris, Ill. . . . 32-page Magazine Press with 1 Pair of Folders**

**C. T. DEARING PRINTING CO., Louisville . . . 64-page Magazine Press with 1 Pair of Folders; 32-page Magazine Press with 1 Pair of Folders; 8-Cylinder Color Press with 1 Pair of Folders**

**EL UNIVERSAL, Mexico City . . . 4 Standard High Speed Units, 1 Pair of Folders**

**O GLOBO, Rio de Janeiro . . . 8-Cylinder Multi-Color Press with 1 Pair of Folders**

**LIGHTNING TYPOGRAPHICAL CRAFTSMEN, Inc., New York . . . Two 8-Cylinder Multi-Color Presses with 1 Pair of Folders each**

**NATIONAL ROTARY PRINTERS, Akron, Ohio . . . 8-Cylinder Color Press with 1 Pair of Folders.**

● The imposing list of presses now on order at the Goss plant indicates a predominant preference for Goss engineering. It proves that Goss is "the publisher's choice" for high speed, quality printing of newspapers and magazines. Ask for specific information.

**THE GOSS PRINTING PRESS COMPANY**
**1535 S. PAULINA ST., CHICAGO**

| NEW YORK | SAN FRANCISCO | LONDON, ENGLAND |
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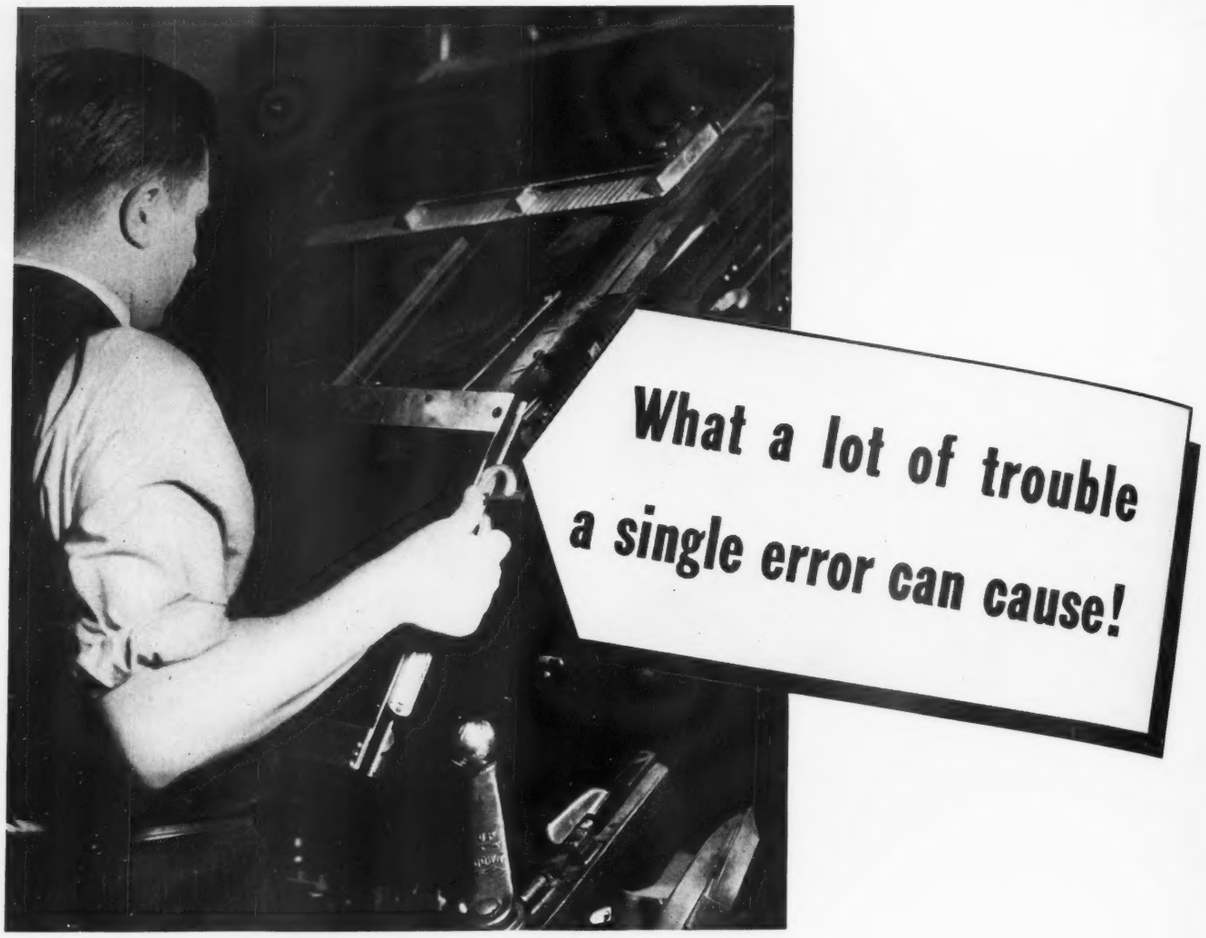
| 220 E. 42nd St. | 707 Call Bldg. | Goss Printing Press Co., Ltd. |

**GOSS**

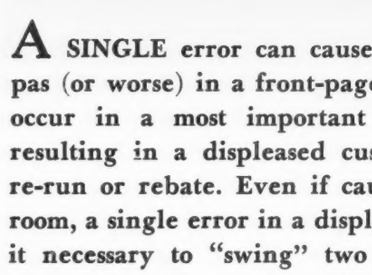



A SINGLE error can cause a ludicrous faux pas (or worse) in a front-page story. Or it may occur in a most important advertisement — resulting in a displeased customer or even a re-run or rebate. Even if caught in the proof room, a single error in a display line may make it necessary to "swing" two magazines — not to mention other machine changes.

Yes, errors in machine composition can be, and often are, very costly. Hence, a service that eliminates ONE-THIRD OF ALL MACHINE ERRORS is worth attention.

BLACK & WHITE Matrix Contrast Service will give you a cleaner paper and eliminate many troublesome incidents caused by preventable errors. At the same time it will conserve your operators' eyesight — which means less fatigue and more work in a given length of time. Finally, it will save time for you and promote increased production in your plant.

*Investigate Matrix Contrast Service. It pays good dividends!*




**MATRIX CONTRAST CORPORATION**

Sole Licensees of the Percy L. Hill Matrix Contrast Patents Nos. 1,466,437 and 1,796,023

**EMPIRE STATE BUILDING, NEW YORK**

European Agents: Funditor, Ltd., 3, Woodbridge Street, Cleckenwell Green, London, E. C. 1

# *Black & White*

# MATRIX CONTRAST SERVICE

# ANPA

## *Newspaper Mechanical Conference Program full of lively topics —*

## *Equipment and supplier manufacturers take available space for exhibits*

**By STAFF WRITER**

ONE of the important topics to come before the Chicago A.N.P.A. Mechanical Conference is that of *Cooperation Between the Advertiser and the Newspaper*. This subject will be discussed at the Monday morning session of the Conference which will be held at the Drake and Knickerbocker Hotels, Chicago, Monday, Tuesday and Wednesday, June 10, 11 and 12. Participating in the discussion will be Carl Chapin, Rothschild advertising manager who will present *The Advertiser's View; The Composing Room View* will be discussed by Mechanical Superintendent B. F. Garrity of the Hartford (Conn.) *Times*, while Director of Art and Reproduction Ben Dalgin of the New York *Times* talks on *Value of a Contact Man Between Newspaper and Advertiser*.

Out of the welter of new developments appearing in the newspaper field, two topics have been selected for discussion at the Chicago meeting. E. E. Fies, Assistant Chief Electrician of the Chicago *Tribune*, will talk on *Our Experience With Fluorescent and Other New Lamps*. President Walter Huber of J. M. Huber, Inc., will tell about the *Velo Printing Process*.

### THE PROGRAM

*Monday Morning*

Accomplishments of the A.N.P.A. Mechanical Department — S. E. Thomason, Publisher, Chicago Daily *Times*
Our Experience with Fluorescent and Other New Lamps — E. E. Fies, Assistant Chief Electrician, Chicago *Tribune*
Cooperation between the Advertiser and the Newspaper
The Advertiser's View — Carl Chapin, Advertising Manager, Maurice L. Rothschild, Chicago
The Composing Room View — B. F. Garrity, Mechanical Superintendent, Hartford *Times*
Value of a Contact Man between Newspaper and Advertiser — Ben Dalgin, Director of Art and Reproduction, New York *Times*

*Monday Afternoon*

**Four Departmental Meetings**

Engravers
Some Suggestions on Negative Making and Etching, Jack Kelt, Mallinckrodt Chemical Works
Composing Room
Operation of the Milwaukee *Journal* Ad Room Production Manager John P. Keating
Stereotypers
Topics to be furnished
Pressmen
Velo Printing Process
Walter Huber, President, J. M. Huber, Inc.

*Tuesday Morning*

**Session for Small Newspapers**

Facts About Type Metals Which Metal Users Should Know, R. H. Braden, Professor of Chemistry, Rochester Mechanics Institute
Discussion

*Tuesday Afternoon*

Report on Composing Room Meeting
Report of Engravers' Meeting

*Wednesday Morning*

Report of Stereotypers' Meeting
Report of Pressmen's Meeting

*Wednesday Afternoon*

**Color Printing, Rotogravure, Offset**

Standardization of Register Marks on Color Plates

# ANPA Mechanical Conference Exhibitors

SO FAR as *Printing Equipment Engineer* has been informed up until the time of going to press with this issue, the companies listed below will have exhibits at the Drake Hotel during the ANPA Mechanical Conference which is to be held at the Drake and Knickerbocker Hotels, Chicago, on Monday, Tuesday and Wednesday, June 10, 11 and 12.

Applications for exhibition space have far exceeded the space originally provided in the Drake's Exhibit Hall. For that reason, some of the manufacturer and supplier exhibits will be located in the Tower Room adjacent to the Ball Room in which the Conference sessions will be held.

Exhibitors are as follows:

*Acme Press Blanket Co.*
*Angle Steel Stool Co.*
*Sam'l Bingham's Son Mfg. Co.*
*E. A. Booth Rubber Co.*
*Bridgeport Engravers Supply Co.*
*Burdett Mfg. Co.*
*Chemco Photo Products Co.*
*Dayton Rubber Mfg. Co.*
*Eastern Newspaper Supply Co.*
*Eastman Kodak Co.*
*Edes Manufacturing Co.*
*Editor & Publisher*
*Federated Metals*
*Goss Printing Press Co.*
*Hammond Machinery Builders*
*Imperial Type Metal Co.*
*Johnstone Electric Co.*
*Klean-O-Mat Corp.*
*Lake Erie Engineering Corp.*
*Linograph Corporation*
*Linotype Parts Co.*
*Ludlow Typograph Co.*
*Matrix Contrast Corp.*
*Mergenthaler Linotype Co.*
*Milwaukee Saw Trimmer Co.*
*Monomelt Co.*
*National Steel & Copper Plate Co.*
*New England Newspaper Supply Co.*
*Ostrander-Seymour Co.*
*Harold M. Pitman Co.*
*Printing Equipment Engineer*
*Rapid Roller Co.*
*J. A. Richards Co.*
*R. R. Robertson*
*Rolled Plate Metal Co.*
*H. B. Rouse & Co.*
*Sovereign Oil Co.*
*Sta-Hi Corp.*
*Stereotex Machinery Co.*
*Tingue, Brown & Co.*
*United American Metals Corp.*
*Vandercook & Sons*
*Vapofier Corp.*

Report of Standardization of Shades of Rotogravure Inks Offset Printing
C. W. Dickinson, R. Hoe & Co.
James H. Gregory, American Type Founders

**Newspaper Exhibit**

A.N.P.A. Newspaper Exhibit, accompanied by explanatory questionnaires covering operations in the engraving, stereotype and press departments.

### *Hotels*

The Drake and Knickerbocker Hotels are about one mile north of the Loop and are directly across the street from one another.

Commercial exhibits, newspaper exhibits, and registration desk will be located at the Drake. It is planned to hold all the sessions there except two or three of the departmental meetings on Monday afternoon.

### *Registration and Admissions*

The registration desk will be located on the main floor of the Drake, adjacent to the Ballroom, where most of the sessions will be held, and also to the commercial exhibits. All those who are in Chicago on Sunday are urged to register on that day. Registration desk will be open at 2 P. M. Those who register on Sunday will confer a great favor on those who do not arrive until Monday.

### *Member Representatives*

Except for trade representatives and a few guests invited by the A.N.P.A., this Conference is a closed meeting for representatives of A.N.P.A. offices only. Any member office may send as many delegates as it wishes, but the rules of the Board of Directors forbid the admission of representatives of non-member papers.

### *Departmental Meetings*

Four departmental meetings will be held on Monday afternoon — photo-engravers, composing room men, stereotypers, pressmen. As was done last year, abstracts of the discussions at these sessions will be prepared and will be presented to the general sessions, for further discussion, on Tuesday afternoon and Wednesday morning.

### *Trade Representatives*

The policy covering the admission of trade representatives to the sessions, which has been in force for some years, has been modified. Manufacturing and supply companies are not now limited to one representative each. Any company serving the newspaper business may have two or more representatives attend the sessions if it so chooses.

Trade representatives must be identified or present credentials in order to register. The A.N.P.A. Mechanical Department will, upon request, send to any company an identification card for each of its representatives. These requests must carry the names of the representatives so that the badges can be prepared in advance. Companies wishing to be represented at the sessions are urged to write for these cards, because by following this procedure registration will be facilitated and much time will be saved. Trade representatives are not allowed to participate in the proceedings except by invitation of the chairman of the session.

### *Advertising Agency Representatives*

Production men of the recognized advertising agencies are invited to attend and to join in the discussions. In this connection, attention is particularly called to the sessions scheduled for Monday morning and Wednesday afternoon.

## *4% Waste Cut*

A PHOTOELECTRIC system of four-color register control on a rotogravure press in the Philadelphia *Inquirer* plant has cut waste expense from about 7% to approximately 3%, thereby saving an estimated $15,000 per year. With this system, developed by General Electric, registration of four colors can be maintained automatically within the tolerance permissible for intaglio or rotogravure printing when operating at web speeds of approximately 1000 fpm.

The control system incorporates two photoelectric scanning heads for each color unit. One head is aligned to scan the margin of the web, on which equally spaced register or index marks are printed simultaneously with the first color impression. The second head is arranged to scan a disk attached to the printing cylinder.

The register correction is accomplished by a reversible pilot motor so geared to the cylinder driving mechanism as to alter the angular displacement of the cylinder with respect to the preceding impression. A corrective motion is thus applied by the pilot motor in response to the corrective impulses from a "mixing panel" relayed through close-coupled thyratron power tubes.

With this method of automatic register control each color cylinder is regulated independently to register with the initial impression as each successive color unit scans the same preprinted register marks on the web.

# *Human Element* in the composing room—All philosophy doesn't change fact that consideration of human element is major enterprise in production of newspaper

By C. FRANK MANN*

*Superintendent Composing Room, The Courier-Journal and The Louisville Times, Louisville, Ky.*

A great publisher, Adolph Ochs, said:

*"Next in importance to the field, itself, is the human organization."*

SOME of my friends will remember that a few years ago I carried to the ANPA Convention in Chicago for distribution among my fellow craftsmen, a card stating that I was a country boy from the hills of Kentucky, trying to learn how to run a composing room. The picture has not changed, except that someone suggested to me a few months ago that I might add another horse to the plow. First, in order to dodge the possibility of an argument with heads of other departments, I must acknowledge that our type is not always exactly type high; our borders are not always perfect; we deliver forms to the stereotypers with type off feet—in short, we make about every mistake that is humanly possible.

I have heard it said that it is possible to get a perfect slug from a slug-casting machine and that perfect type and borders may be cast on the type casting and material making machines. I have never doubted that it could be done. Yet, it is my purpose here to study the human element where it applies to the composing room.

Let us, then, admit that the machinery is as near perfect as possible when it is installed in our composing room. But it is new and may represent a new idea in producing type or slugs; perhaps so new, and so different that no one on our force is familiar with it. So, the human element starts here. We learn to crawl, then to walk and in doing it we often stumble. About the time we master the new machine we begin to branch out and learn new ideas about production. Applying the knowledge gained in the old way to the possibilities of the new machine, we soon begin to find ways to do the job better and faster.

There used to be a general tendency among publishers and general managers to consider composing room operations as being highly mysterious. And it is true that efforts to compare one paper with another through page costs added to the mystery. Usually, when discussions of cost came up, high composing room costs were explained as being due to tabular composition, store changes and many other similar factors. The alert composing room executive today does not depend upon his ability to argue his points with his management, but is in a position to determine the degree of importance of any factor pertaining to his costs by simply referring to his cost system, which is kept as a permanent feature.

In a discussion of the human element we must consider for a moment the physical conditions such as air conditioning, lighting, proper placing of machinery and equipment and cleanliness. All of these things are important in obtaining maximum production. With all our physical and human imperfections we are striving each day to produce perfect slugs, and borders and keep type on its feet in order that the stereotypers can furnish the pressmen with as printable plates as possible.

Many newspapers which are fortunately situated with regard to competition have allowed newspaper operations to drift into a manufacturing process. This is a mistaken theory. A newspaper is essentially a creative product and the manufacturing process is only incidental to the creative processes.

Recently, I saw a comic cut of an Eskimo using a fishing rod. He was riding on his sled, casting, and the end of the line was falling on the lead dog. The lines under the cut read: "He finally found a way to speed up that lead dog." If we can speed up the lead dog by using a casting rod, even if it was never heard of before in a composing room, let's put in the idea and give it a trial.

It should be remembered that in dealing with a printer in the composing room we should never permit his limitations as a printer to obscure his qualities as a man. It is advantageous that we first give considerable thought to the man. Then we can further encourage the training in new ideas.

Since activities of the composing room are influenced tremendously by the condition of the materials furnished by the tributary departments and by the time factors involved, many large plants have found it advantageous to employ a mechanical production manager to coordinate the various departments in solving production problems. In many newspaper composing rooms precious moments have been wasted through lack of coordination and through outmoded methods and systems of operation. The management has failed to supply modern machinery, equipment, and inspiration. If business administrators obligate themselves to sustain the executive staffs in the composing room in applying the necessary executive function, potentials will be developed beyond their fondest hopes.

The greatest measure of progress is achieved through inspiring subordinate executives and even men working under them, to think, encouraging initiative in them by adopting constructive and helpful suggestions and rewarding successful application by recognition of achievement.

(*Continued on Page 98*)

## Keeping Up With the Changes

*"We are entering an era of profound changes," observed Dr. William F. Talbot, Director of Research, General Printing Ink Corporation, at a recent meeting of the Young Executives Club in New York. "One of the manifestations is the printers' consciousness of speed." He dwelled on the different types of speed-up in ink manufacture, calling attention to the gradual change in manufacturing techniques.*

*Specifically, Dr. Talbot commented on the advances in gravure printing especially in packaging work. It was interesting to note the importance of paper as a functional tool in this type of work. He quoted Baker's Cocoa container in which the switch to a moisture-proof lacquer on paper saved a sum almost equal to the net profit of the product. There are a number of properties which had to be taken into consideration in preparing the ink, such as insect repellence, odor, flavor, bleeds, printing surface, etcetera, but the skill of organic chemistry overcame them all.*

*He covered briefly other advances on the printing horizon such as controlled dot etching, metal decorating, lithographic newspaper printing, and other developments. "As we supply the printing industry with new items, so do our suppliers in turn supply us with new items, resins and dry colors. So much so that it takes all we can muster to be able to digest all this new material," he pointed out.*

# OFFSET *at the Trenton (N.J.) Times plant is used to print a Sunday picture section—Press is an eight-color perfecting machine which has been operated at 28,000 16-page tabloid papers per hour running on color*

**By JULIAN GORSE**

MUCH has been said and written recently about printing newspapers by the offset process. In this little article about the Trenton (N.J.) *Times-Advertiser's Sunday Picture Section* which is printed by offset, the writer wants to make a few observations regarding current interest in the subject. Just as long as the public demands last-minute news in every daily edition, the offset process in newspaper production is under a handicap. The present stereotype method used in daily newspapers permits starting a press in ten or twelve minutes after the last two or three pages are closed in the composing room. From this viewpoint, the writer feels that offset plate-making must be speeded up a hundred times or more before the editor will be enabled to handle that all-important late news.

On the other hand, many newspaper executives feel that offset printing offers an improvement in pictorial printing quality over the stereotype plate process of printing. The fact that advertising art work and news-pictures can be reproduced at good speed, on paper slightly better than newsprint, and with a 120-or-finer screen is something not to be passed over hurriedly.

An interesting venture by offset in the newspaper field is the installation some time ago in the plant of the Trenton (N.J.) *Times*, of what is probably the largest web offset press ever used in newspaper work in this country. The press is an eight-color perfecting machine. It was installed to permit reproduction of color photographs in the *Times-Advertiser Sunday Picture Section* and hundreds of them have been reproduced in the year and a half of its operation. This press was designed and built to the *Times*' specification by R. Hoe and Company and is considered by numerous offset-lithographers who have seen it in operation, "to be a fine piece of offset printing machinery."

This press is a combination of four perfecting units with automatic reel web feed at one end and a high-speed newspaper folder at the other. It prints four colors on both sides of the web in one operation, the printing of both sides of the sheet in one unit being simultaneous. The blanket cylinder on one side of the sheet acts as the impression cylinder for the other side and *vice versa*. There are four cylinders in each unit, two plate and two blanket.

The reel or web feed carries three rolls of paper, each roll weighing about one ton. The roll the web is printing from is driven by two belts, and tension on the web is maintained automatically throughout the run through these belts. Change from the fast emptying spool to a new roll is made at almost any speed by one man, the impression automatically lifting while the wet paster goes through the cylinders. There are no compensators or rollers between the press units; the paper passes straight through the four units to the rollers and compensators in the folder.

The cylinders are 74 in. wide between the bearers and 47⅛ in. circumference. The press will print 16 standard size newspapers with four colors on each page or 32 tabloid size pages with the same color possibilities. The press has been operated at a speed of 28,000 16-page tabloid papers per hour running on color.

This offset machine has a total of 88 ink rollers in its 8 printing units. Each plate has 4 ink form rollers and 2 dampening form rollers. The water fountain rollers are motor-driven by current from two small generators — one a constant speed and the other variable with the press speed. A balance of the two sources of current keeps the speed of the water in time with press needs.

Impression is operated electrically and can be manipulated individual units on and off or all together from the main control station.

A portion of the plate cylinder opens to permit insertion of the plate bars, and in closing up this section, the plate is pulled up snugly to the cylinder.

**TRADE NAME INDEX**

**The Trade Name Index in the 1940 Reference Issue of Printing Equipment Engineer has been assembled for the convenience of mechanical and production executives. In it are listed 1058 Trade Names pertaining to equipment and supplies and 420 Paper Trade Names.**

A ½ in. gap constitutes all of the non-printing surface in the 47⅛ in. cylinder circumference.

Plate cylinders can be moved forward, back or sideways at any speed, and it has not been necessary to remove a plate because it was "cockeyed" on the cylinder.

All the gears and bearings, except ink rollers, are enclosed in housings and oiled by a pump in the bottom housing of each unit. The little pump forces the oil to the top of the unit and from there it drips down to feed all working parts. Plastacele windows are cut into the housings permitting a view of the oiling or working parts.

Low grade paper produced an ink problem in picking and building up paper dust images on the blankets. The *Times* solved the problem by putting in an ink plant for experimental purposes and now makes the colors and black ink for the offset press.

### *Plate Making Operations*

The plant is complete in itself from plate graining to color separations, all being accomplished by the *Times* staff. Color sensitive negatives, Dufay or Kodachrome, are grouped in page layouts, separations made and halftone positives are produced from the clear tone negative separations. Lithographic Foundation's deep etch process is used on aluminum plates.

A large photo-composing machine is used for printing down on the plates, both for color and blacks. A small registration mark is printed down on the back outside edges of each plate, and of course, all subsequent exposures are in register with these marks. These small marks are used to register the plate in the bending machine where the plate bars are attached. This assures all plates being in register and parallel with each other. Register is obtained on the press very rapidly and usually a color job is running 15 min. after the last plate is put on the press.

Black pages are shot as a page, and two tabloid page negatives are used for the making of a two-page, halftone positive.

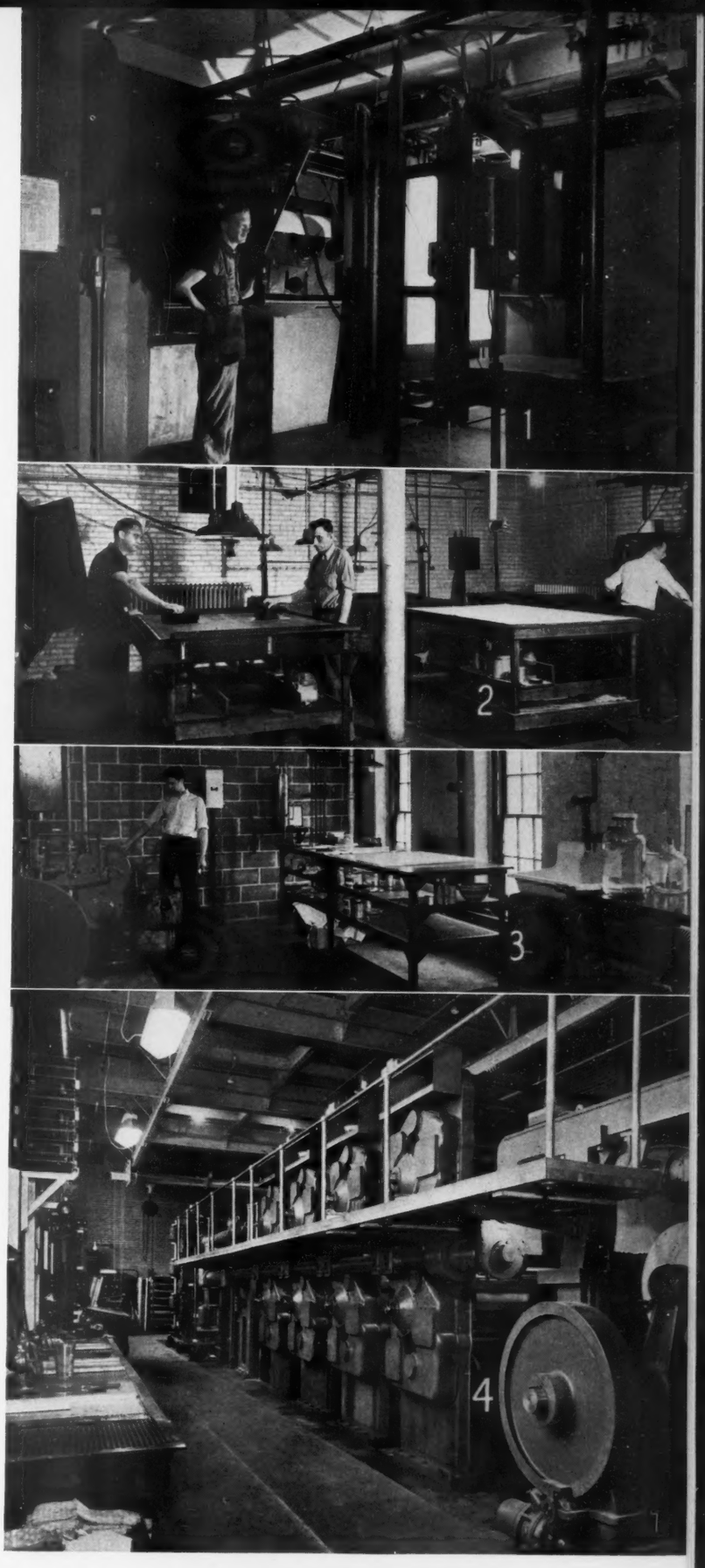
Wet plates are used for the black positives because of the necessity for stripping in the type matter. Dry plates are used for all the color.

A laboratory is maintained in the color plant and in it all solutions are made from pure chemicals.

Two stills are available for a constant supply of distilled water which is used in the fountain solution and in all photographic and plate making mixtures.

Pressroom, plate-making room and photographic gallery are all air-conditioned.

A color photographic studio, a Bermpole one-shot color camera, a 4 in. by 5 in. and a 5 in. by 7 in. news cameras with color corrected lenses are used to supply the plant with color pictures for reproduction.




**Views in offset department of Trenton (N.J.) Times where a Sunday pictorial section is produced. (1) Part of camera gallery showing front view of 30 in. revolving screen M-H camera. (2) Plate-making department: Photo-composing machine, etching table and deep-etch plate in process of being developed. (3) Ink mill and mixer and a part of the laboratory. (4) Looking from the reel end of Hoe press up the drive side towards the folder. Small viewing ports can be seen in the housings where action of oiling system can be watched at any time.**

# Model Newspaper Plant

***Competition winner's design includes pleasing production arrangement, glass block, air conditioning and distinctive outside characteristics***

BECAUSE plant planning is a favorite (if sometimes visionary) occupation of newspaper executives, *Printing Equipment Engineer* is publishing this article about the recent architectural competition sponsored by Owens-Illinois Glass Company. We are also printing a miniature reproduction of the drawings of the first prize winner. This model newspaper plant was designed by Charles W. Lorenz of St. Louis. The judging was done by a group of architects who studied the hundreds of competing designs at PEDAC in Rockefeller Center, New York, N. Y., in April.

The judges decided that Mr. Lorenz had submitted the best plan to solve a carefully worked out problem which might confront a typical publisher in planning construction of a newspaper plant. All of the designs featured use of Insulux Glass Block manufactured by Owens-Illinois Glass Company.

Second place prize in the contest was awarded to Wayne Stoeffle and Robert A. Deshon, both of Massachusetts Institute of Technology, and third prize went to Francis R. Meisch and Keith I. Hibner also of Massachusetts Institute of Technology.

This is the problem the competing architects set out to solve:

*The Evening Banner*, a newspaper with a circulation of 24,000 serving a busy city of 100,000 along the mid-Atlantic seaboard, needs a new plant. Its publisher owns a level corner site at the intersection of two busy streets.

The frontage is 100 ft. facing southwest, the depth 128 ft. facing southeast, a side street. Basic requirements are these: The building must have personality, must proclaim to all the importance of the newspaper in the life of the community; and it must shelter four very dissimilar activities — the receiving and storing of newsprint and other supplies, the office functions of gathering and preparing news and advertising, the manufacturing processes of typesetting, casting and printing, and the rapid delivery of the completed newspapers.

The client has an open mind with regard to the form of the building; it might be of one or two stories, wholly or in part, with or without mezzanine. A basement seems unavoidable, and this can extend out 10 ft. under sidewalks if necessary.

Two-story buildings surround the site. The client has in mind some sort of tower or other attention-arresting feature, capable of being illuminated at night, provided such a feature can be integrated as a logical and effective element.

Air conditioning of pressroom and newsprint storage space, to maintain a constant temperature and humidity, is an immediate necessity; he believes that for the other space units the combination of glass block and window would make practicable a limited operation of air conditioning equipment for seasonal periods.

There are no city restrictions as to building line, height or setbacks.

Judges of the contest were Frederick L. Ackerman, Wallace K. Harrison, Ely Jacques Kahn, William F. Lamb, Edward D. Stone and Ralph Walker, all of New York; George Howe, Philadelphia, and Henry R. Shepley, Boston. All are nationally-known architects.

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**View in new Chicago plant of National Steel and Copper Plate Company. —** *Photo-engraver's metal is ground and polished in three operations. The first operation removes a very slight skin or film which exposes all pits, scratches and abrasives. The second operation is for the finishing and polishing of the plates and further exposes imperfections. After all imperfections and blemishes have been removed, the plates are buffed to mirror finish.*

*As will be seen in this view, a blower-exhaust system is used for cleanliness. During the polishing operations it is essential that all foreign particles be removed from the air.*

*Fluorescent lighting is used during the entire operation. These lights tend to show up the slightest blemishes which might otherwise be imperceptible to the eye.*

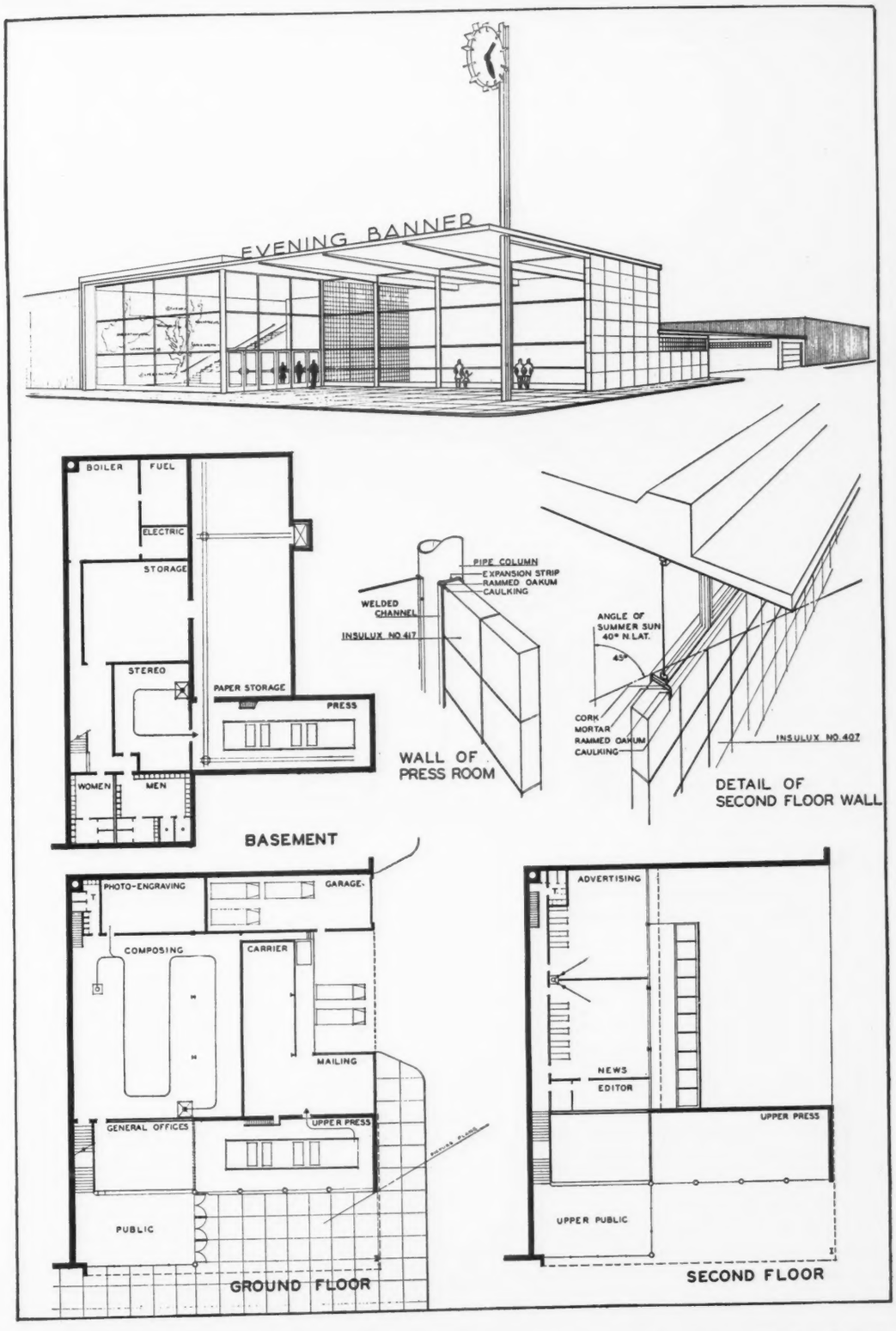
*The National Steel and Copper Plate Company extends an invitation to all engravers to visit its new plant.*

### *$63,200 Awards Applicable*

The James F. Lincoln Arc Welding Foundation has announced an Industrial Progress Program in which substantial sums of money will be awarded for reports describing advances and improvements by application of arc welding to industrial work, including design, manufacture, fabrication, construction, welding service and maintenance.

Those engaged in the printing industry will be eligible to enter for the $63,200 which has been made available out of a total appropriation of $200,000. Complete particulars may be obtained by writing the James F. Lincoln Arc Welding Foundation, Cleveland, Ohio.

**Paper Trade Name Index** *appears on pages 168-169, 1940 Reference Issue of P-Double-E. Gives Trade Names of many kinds of paper stock, tells who makes the stock and what kind of stock it is. Consult this index when you want to know who makes it.*




**Miniature reproduction of the first prize winning design for newspaper plant, sponsored by Owens-Illinois Glass Co. Paper has circulation of 24,000 in city of 100,000 people. St. Louis's Charles W. Lorenz is the designer. Aside from the practical and compact arrangement of the various departments, note the distinctive building features — glass block, the clock landmark, the large map on the window, presumably indicating the territory served by the Banner, the covered entrance area and the traditional windows through which the public may view operation of the printing press. Don't you agree with the judges' decision?**

## *Print Souvenir Books*

Five miniature books on the history of the printing industry on the Pacific Coast will be printed by the various Craftsmen's Clubs and will be given free of charge to all men and women registering at the International Craftsmen's Convention in San Francisco, August 4 to 8 inclusive.

The set of books, beautifully printed and hand bound are to be packed in a cloth-covered, gold-stamped, slip case. Only enough sets are to be printed to completely supply the Convention registrants.

Ivan Giusti, Registration Committee Chairman, has announced that registration books at $10 each for both men and women are ready. Purchase of a registration book will entitle the holder to every Convention event as well as the opportunity to visit the San Francisco 1940 Fair on Treasure Island, and a complete set of the miniature books in the slip case.

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### *Intertype Cuttings*

Intertype Corporation announces another addition to the Futura family, and this month shows the Bold Condensed with Medium Condensed. In the square serif division Cairo Medium with Bold is shown in the 12 point size. The 24 point Baskerville with Italic is one of Intertype's new cuttings of this standard Roman face.

**ABCDEFG abcdefghijklmnopqrstuvwxyz 12345**
**ABCDEFG abcdefghijklmnopqrstuvwxyz 12345**
8 Point Futura Bold Condensed with 10 Point Medium Condensed

**ABCDEF abcdefghijklmnopqrstu 12345**
**ABCDEF abcdefghijklmnopqrstu 12345**
10 Point Futura Bold Condensed with 12 Point Medium Condensed

**ABCDEF abcdefghijklmnopq 12345**
**ABCDEF abcdefghijklmnopq 12345**
12 Point Futura Bold Condensed with 14 Point Medium Condensed

ABCD abcdefghijkl 12345
**ABCD abcdefghijkl 12345**
12 Point Cairo Medium with Bold

ABC abcdef 123
*ABC abcdef 123*
24 Point Baskerville with Italic

**Who Makes it?** The goldenrod paper section, 64 pages, containing the latest revised P-Double-E Printing Equipment and Supplies Index will tell you. It's bound into the 1940 Reference Issue. Consult the index when you want to know where equipment and supplies may be obtained.

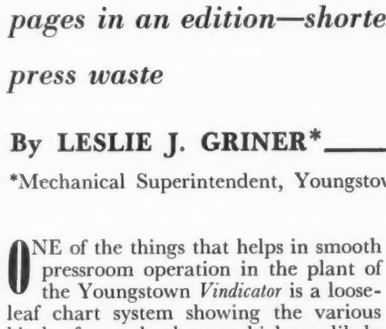
# DIAGRAMS *of 8-unit press kept in loose-leaf form indicate how press should be hooked up for varying pages in an edition—shortens starting time and conserves press waste*

**(See diagram, page 41)**

**By LESLIE J. GRINER***

*Mechanical Superintendent, Youngstown (O.) *Vindicator*.

ONE of the things that helps in smooth pressroom operation in the plant of the Youngstown *Vindicator* is a loose-leaf chart system showing the various kinds of press hook-ups which are likely to be required for printing the *Vindicator* according to the number of pages. These diagrams are kept in the office of Pressroom Superintendent Earl Weiskittel and can be referred to at any time.




**This diagram illustrates former arrangement for 64-page paper in four sections in plant of Youngstown (O.) Vindicator.**

There are a great number of combinations to which our press can be adapted. In fact, the paging in our paper varies from day to day and from season to season. For this reason, it is advantageous to have data at hand by means of which a press can be prepared quickly to print any number of pages.

Another reason for keeping these hook-up diagrams is that while we have a 64-page capacity press, we do not use all eight units every day. The paging fluctuates widely from day to day. This makes it desirable to stagger the use of the various units so that they will be used as equally as possible over a period of time. Another factor entering into the staggering of press units is that when a big paper is to be printed, all of the units will be in mechanical shape to handle it without "limbering up" exercises and loss of time. This has special reference to blankets, rollers, ink, etc., which will be apparent to every pressroom executive.

Mr. Weiskittel has a quantity of sheets upon which are printed a side elevation diagram of our 8-unit press. Above the press diagram are printed rectangular spaces in the squares of which are indicated the page folios for each plate cylinder. According to the number of pages in an edition, the diagram is marked with straight pencil lines through the units from reels to folders. To illustrate the idea, the accompanying diagram has been filled in to illustrate how our 8-unit press is threaded for a 64-page paper.

The advantages of the system will be apparent when the reasons for its adoption have been enumerated as follows: (1) The pressroom superintendent knows instantly how the press units should be gotten ready for the varying number of pages in editions from day to day; (2) The press can be started promptly because it can be prepared sufficiently in advance of edition time without any plates at all in the press so there will be no delay; (3) When the run is started there is no worry about cutting off the tops of pages because of unset compensator rollers; (4) It makes little difference whether any certain pressman skilled in preparing the press is at work; (5) The work can be assigned to any pressman at the discretion of the pressroom superintendent, which permits the superintendent to attend to other duties; (6) By referring to the charts, a new pressman can go ahead with the work; (7) If Mr. Weiskittel should be absent from the plant he knows this work will be done properly; (8) Considerable reduction in waste has resulted in our plant because of the use of these charts.

In some pressrooms, it has been customary for each pressman to put some kind of a private mark with a chisel or perhaps a paint brush mark, on the bracket or press frame to indicate the proper setting of tension rollers. In the *Vindicator* pressroom, this is not permitted. The proper setting of compensator rollers is indicated in the diagram sheets, as shown in the accompanying illustration. When the compensation have been set properly, the distance from the edge of the roller to the edge of the bracket is measured and transferred to the diagram sheet.

Besides making use of the regular departmental indexes in the 1940 Reference Issue of *Printing Equipment Engineer*, turn to the new Trade Name Index to be found in the goldenrod paper section.

# *Cincinnati Celebrates*

A GREATER Cincinnati Committee for the celebration of the Five Hundredth Anniversary of the Invention of Printing from Movable Type has been organized by companies representing the printing, paper and allied fields within a radius of 50 miles of the Queen City. Lee Augustine, vice president of the Printing Machinery Company, Cincinnati, is general chairman.

The observance opened April 11 with a dinner at Hotel Alms. The program was inaugurated with a dinner featuring Douglas C. McMurtrie, who addressed 500 members of the Cincinnati Craftsmen's club and guests.

The Cincinnati Club of Printing House Craftsmen which has taken the leadership in sponsoring the commemorative program on Johann Gutenberg's invention has the cooperation of numerous allied crafts and organizations in the printing field as well as allied trade groups.

Lee Augustine, general chairman announced that three printing authorities had been named to aid in the commemorative projects. Honorary co-chairmen John M. Callahan, printing executive with the U. S. Printing & Lithographing Company and president of the International Association of Printing House Craftsmen; A. H. Pugh, president of the Pugh Printing Company and president of Franklin Typothetae and Walter E. Sooy, vice president of the Gardner-Richardson Company and president of the Cincinnati Club of Printing House Craftsmen.

Other committee appointments include: Julius Gelb, of the Printers Supply Men's Guild of Cincinnati; Elmer Miller, of the Franklin Typothetae; John L. Richey, Central States Paper Trade Association and Edwin H. Tiemeyer, the Cincinnati Club of Printing House Craftsmen. Willbur Krehbiel will serve as treasurer of the Jubilee Celebration.

Club governors for the local celebration include August Bruder, George Criswell, Erwin Deye, Charles Pigman, Marcus Overstreet and Dan Weber, all prominently identified with the local printing and allied trades.

The nine-months celebration program planned by the Cincinnati club includes banquets, essay contests in local schools, "Open House" programs in printing establishments and a series of educational programs throughout the year. A mammoth Graphic Arts exhibition to climax the program this year is being given consideration by the committee in charge.

Executives of the Cincinnati Club of Printing House Craftsmen include Walter Sooy, president; Irwin Goller, vice president; E. J. McGill, secretary and J. M. Callahan, treasurer.

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## *Complete Futura Booklet*

A 28-page booklet containing a complete showing of Intertype Futura is being offered to the trade. The booklet shows 7 different series and 7 combinations ranging in sizes from 6 to 30 point.



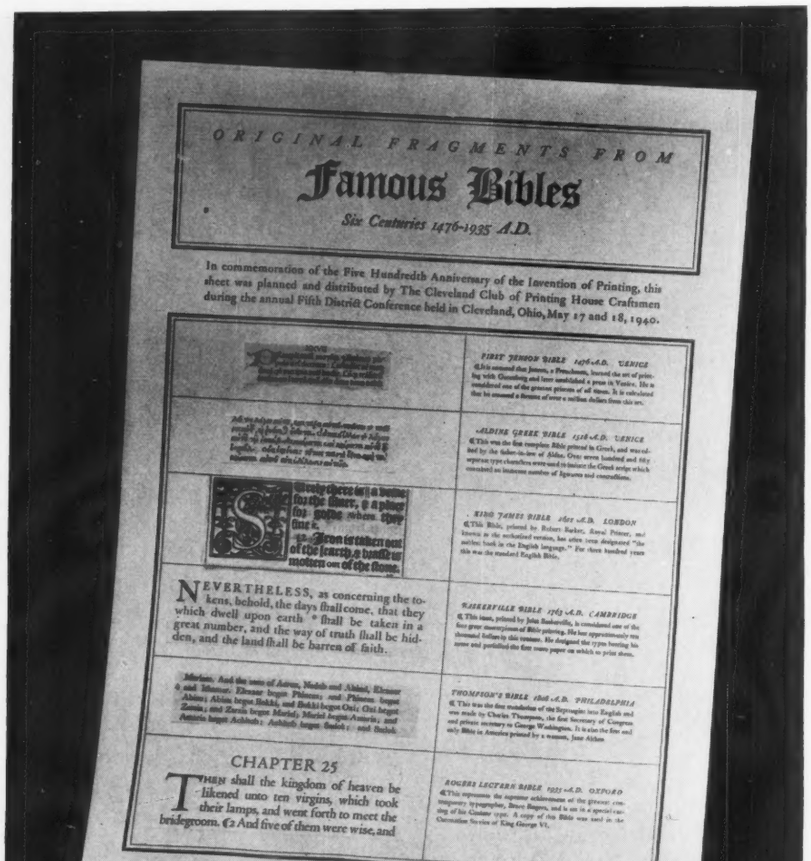

**Side elevation diagram of 8-unit 2-folder press in plant of Youngstown (O.) Vindicator. Kept in loose-leaf form, Pressroom Superintendent Earl Weiskittel marks in the web leads, compensator roller adjustments and page location for each kind of run according to the number of pages in the edition. As is explained in the accompanying article, the use of this diagram system results in smoother pressroom operation, economizes starting time and considerable press waste savings.**

**(See Mr. Griner's Article, page 40)**

**This diagram shows the press hooked up for a 64-page paper. The heavy black lines indicate angle bar lead from unit 6, pages 7, 8, 9 and 10 (indicated in heavy figures). In this hookup, the paper is printed straight run in four sections — 16, 20, 8 and 20 pages. No. 1 folder is used; four-former run (balloon and lower). Black dots indicate adjustable tensions with adjustment in inches marked alongside.**

# UNIQUE SOUVENIR *Original Bible Fragments*

## *presented during Fifth District Craftsmen's Conference*


ORIGINAL FRAGMENTS FROM

Famous Bibles

Six Centuries 1476-1935 A.D.

In commemoration of the Five Hundredth Anniversary of the Invention of Printing, this sheet was planned and distributed by The Cleveland Club of Printing House Craftsmen during the annual Fifth District Conference held in Cleveland, Ohio, May 17 and 18, 1940.

FIRST JENSON BIBLE 1476 A.D. VENICE

ALDINE GREEK BIBLE 1518 A.D. VENICE

KING JAMES BIBLE 1611 A.D. LONDON

BASKERVILLE BIBLE 1763 A.D. CAMBRIDGE

THOMPSON'S BIBLE 1808 A.D. PHILADELPHIA

ROGERS LECTERN BIBLE 1935 A.D. OXFORD

NEVERTHELESS, as concerning the tokens, behold, the days shall come, that they which dwell upon earth * shall be taken in a great number, and the way of truth shall be hidden, and the land shall be barren of faith.

CHAPTER 25

THEN shall the kingdom of heaven be likened unto ten virgins, which took their lamps, and went forth to meet the bridegroom. ¶ And five of them were wise, and

Fragments donated by Otto F. Ege, Cleveland School of Art

A HIGHLIGHT of the Fifth District Conference of the International Association of Printing House Craftsmen, held recently in Cleveland, was the impressive luncheon on May 18. With the 500th Anniversary of the Invention of Printing as the theme for the celebration, outstanding Cleveland personages and Craftsmen dignitaries were accorded places of honor at the speakers' table, and 400 assembled guests participated in the dramatic program. Johann Gutenberg, effectively impersonated by Wayne Mack (well known Cleveland radio program director), discharged the duties of master of ceremonies. John J. Deviny, a past president of the International Association of Printing House Craftsmen, and former Executive Vice President of the United Typothetae of America, delivered an inspiring and effective address on *The Significance of the Invention of Printing.*

The luncheon guests were presented with an unusual souvenir prepared by the Cleveland Club. It consisted of a background sheet on which were pasted six *original* fragments of famous bibles. The fragments were taken from one outstanding bible printed in each of the six centuries since the invention of printing. A caption identifying and describing each fragment was placed beside the corresponding fragment. The mounting sheet of heavy weight ivory text is about 11 in. by 15 in., beautifully printed in two colors at the shop of Horace Carr. The original bible pages, from which the fragments were prepared were donated from the collection of Otto F. Ege of Cleveland.

Original fragments from the following bibles were used on the souvenir: *First Jenson Bible—1476 A. D.—Venice; Aldine Greek Bible—1518 A. D.—Venice; King James Bible—1611 A. D.—London; Baskerville Bible—1763 A. D.—Cambridge; Thompson's Bible—1808 A. D.—Philadelphia; and Rogers Lectern Bible—1935 A. D.—Oxford.*

**Limited number of souvenirs available at $1 each. Address Ed Samuel, 623 St. Clair Ave., N. E., Cleveland, O.**

### *Masterson Joins Huber*

President Walter Huber, of J. M. Huber, Inc., has announced that on June 1, John M. Masterson became a part of the sales organization and will be engaged in the promotion and sale of the new "Velo" Cold Set Printing Process. Mr. Masterson is widely known throughout the printing and publishing fields, having been associated with R. Hoe & Co., Inc., in various executive capacities from 1919 to 1938, when he resigned as Vice President and General Sales Manager. Since February 1939, he has been connected with the Geo. H. Morrill Co. Div., General Printing Ink Corporation as Special Assistant to General Manager Arthur S. Thompson.

In an interview with a representative of *Printing Equipment Engineer*, Mr. Masterson stated "In severing my connection with the Geo. H. Morrill Co., I do so with a definite sense of regret in leaving this fine organization and one which enjoys such a splendid reputation in the printing trade, but I am looking forward with a great deal of interest and anticipation to my new association with J. M. Huber, Inc., in conjunction with the sale of the "Velo" Cold Set Printing Process which, I believe, should be a distinct advancement in the printing art and one which, with the proper application, should prove a constructive improvement for the entire printing industry."

### *Hosts to 1940 Convention*

Detroit Stereotypers and Electrotypers are to be hosts to the 39th annual convention of the International Stereotypers' and Electrotypers' Union from July 15 to 20th with headquarters at the Book Cadillac Hotel.

The Detroit unions are anticipating a large attendance and have planned an elaborate program, including, besides a banquet and smoker, a trip to Greenfield Village and a boat ride to Bois Blanc Island pleasure resort.

### *Offset-Letterpress*

A broadside entitled *Orchids To You* has been published by Dayton Rubber Mfg. Co. One side of the broadside was printed one color and black by offset. The other side printed by letterpress. The idea of combining two different printing processes presented a production problem because the large roller illustration was printed sectionally on both sides of the sheet so that when folded the illustration would appear as one roller but printed by two processes. The production problem involved is explained in a booklet accompanying the broadside.

# IOWA EXECUTIVES *on their toes*

## *at Sioux City newspaper mechanical meeting — Costs, offset printing, new developments discussed*

**By STAFF WRITER**

MECHANICAL and production executives attending the fourteenth annual meeting of the Iowa Newspaper Mechanical Conference were told by General Manager E. J. Kahler of the Sioux Falls (S. D.) *Argus-Leader* that rising costs—salaries, wages, taxes, newsprint and other supplies entering into the making of newspapers necessitated the reduction of operating expenses. Mr. Kahler discussed the present state of the industry and among other things, said that most consolidations and suspensions of newspapers recently had been in industrial centers. To bring home effectively to mechanical executives the necessity for reducing costs he stated that taxes (governmental and otherwise) on his paper were $8,000–$9,000 per year. Now these taxes are $25,000 per year. Mechanical executives can help considerably by watching plant operating costs. He believes newspapers must meet competition of radio and magazines by improving copy generally and by improving the printed appearance of the paper.

In excess of 300 persons attended the conference at Hotel Martin in Sioux City, Iowa, on Monday and Tuesday, May 19 and 20. Newspaper mechanical executives were in attendance from several states adjacent to Iowa, including Colorado, North and South Dakota, Nebraska, Kansas, Minnesota, Wisconsin, Missouri, Illinois and Indiana.

Mechanical Superintendent Guy J. Chappell of the Iowa City *Press Citizen*, presided as president of the Iowa Mechanical Conference.

So far as it has been developed, the application of the offset printing process to newspapers was discussed by James H. Gregory of E. G. Ryan & Co., Chicago, which firm represents Webendorfer-Wills Div. of American Type Founders. Mr. Gregory described the offset process, the Hartford *Newsdaily* installation and some of the 16 weekly tabloid papers now being published. He stated at the present time his firm had nothing to offer the large city daily newspaper.

Mr. Gregory said newspapers in smaller towns might eventually meet competition of the predicted radio broadcast newspapers and the large centralized papers by the use of offset printing. He stated that while offset did simplify certain plate-making operations, yet a high degree of skill is necessary in the making of offset plates. He asserted that production costs were considerably less than by letterpress.

### *Group Meetings*

On Monday afternoon the delegates broke up into three group meetings—one for the composing room superintendents and machinists, one for the stereotypers and pressmen and one for the photo-engravers.

At the composing room meeting, Tod Bleuer, Composing Room Superintendent of the Davenport (Ia.) *Democrat*, presided as chairman. Clifford C. Holly of Mergenthaler Linotype Co., Clay A. Wellman of Ludlow Typograph Co., Walter Severin of Intertype Corporation, George Hanson of Lanston Monotype Machine Co., and C. E. Murray of Linograph Corporation, each in turn, discussed recent mechanical improvements in their equipments.

Chief Machinist George Curle of the Minneapolis *Tribune*, told about the organization of a machinists' group in and about Minneapolis territory. The purposes of the club are purely educational. Technical problems associated with composing machinery are discussed. At an annual dinner meeting held recently, machinists from St. Paul,

## Office Skit Brings Down the House

ONE of the highlights of the recent Iowa Newspaper Mechanical Conference was the office skit presented by General Manager E. J. Kahler of the Sioux Falls (S.D.) *Argus-Leader* and several of his mechanical department heads. Besides Mr. Kahler, Composing Room Superintendent Walter Kunitz, Stereotype Foreman Earl Caldwell and Pressroom Foreman George Domsitz, participated. Here's a brief cross-section of the skit.

The scene opened in the general manager's office where regular executive conferences are held, and at which time mechanical executives are presumed to give satisfactory answers about expenses, those management problems which have been caused by the mechanical departments and other matters; it is also a time when a mechanical executive may get some of his troubles out of his system.

For convenience we will refer to the various gentlemen by initials.

After certain preliminaries were disposed of, C.R.S. produces a large sheet of ad copy for a local department store. It's a work of art. Finely penciled copy is interspersed with angled illustrations. Holding it up he complains about its illegibility. G.M. wants to know what's wrong. C.R.S. suggests the copy be written on separate pieces of paper suitably indexed to correspond with the index marks in spaces which should be left blank in the layout. Some reference is made to copy looking like a European battlefield and besides it's costly stuff to the composing room. G.M. promises to see what can be done about it.

Says G.M., "Well, P.R.F., we've been having a pretty good looking paper lately."

P.R.F.: "Yeah, since we got those new blankets the paper has been printing up."

S.F.: "How do you get that way? How about all this new stereotype equipment we put in? Hasn't that got something to do with the good looks of the paper? Blankets don't make the paper — it's the good plates you've been getting."

C.R.S.: "Yas — and I imagine good type and square makeup have got something to do with it, too." (Conversation drifts along amiably.)

C.R.S. has a thought. Says he: "Say, Boss, the Iowa Conference will be held in Sioux City next week. You know, you said you'd let us know if we could go. How about it?"

G.M.: "I thought this was a composing room group meeting — why do you fellows all want to go?"

C.R.S.: Well, Boss, it's this way. The meeting *was* organized by the composing room executives —

S.F.: "Whoa, there! After you fellows met, thinking you had all the answers, you found you couldn't get any place and so you came to us because you needed some real education on how to get out a paper. Why, you even invited in the photo-engravers!"

Some more gentle ribbing, after which G.M. tells the boys: "Well, it looks like all of you can learn something, and besides I want a better looking paper than we are printing now. Have all of you arranged for the paper to be gotten out the same as usual while you're away?"

C.R.S., S.F. and P.R.F. (in unison): "We sure have."

G.M.: "All right, go on up to the office and get your expense money — but remember, I will expect you to bring back something that will improve mechanical department operation or improve appearance of the paper."

C.R.S., S.F. and P.R.F.: "Thanks, Boss."

Minneapolis, St. Cloud and other cities, were in attendance. Discussions at the club meetings are centered upon plant maintenance, work charts, adjustments, and the like.

The composing room executives were so impressed with Mr. Curle's presentation of the value of such a club that they voted unanimously to recommend to the Tuesday morning meeting that the Iowa conference schedule a machinists' group meeting at the 1941 conference.

During the Question Box period, Chairman Bleuer read production problems which had been presented for solution. It was stated that if it is possible, the cheapest method of making corrections is on the dump rather than in the form, but that in many composing rooms it is necessary to make a portion of them in the form at the last minute before the form is sent to the stereotyper.

Dependent upon equipment, it was stated that an average of 200 inches of display advertising assemblage per day per man was a fair production standard in the ad alley.

Malcolm Ean, Chief Machinist for the Iowa City (Ia.) *Press Citizen*, stated he had overcome lubrication difficulties on some of the older style Mohr Lino-Saws by using Dixon's Microfyne graphite in place of oil for lubricating purposes.

### *Photo Engravers' Meeting*

Photo-Engraving Superintendent A. P. Ashton of the Sioux City *Journal*, presided at the photo-engravers' clinic. At this meeting there were some 25 engraving executives present. D. D. Curriden, Superintendent of the Star Engraving Company, Minneapolis, discussed "Engraving Problems of the *Daily Newspaper*."

### *Stereotype-Pressroom Meeting*

Stereotype Superintendent Earl Caldwell of the Sioux Falls (S.D.) *Argus-Leader*, acted as chairman of the meeting. He introduced Technician Guy Burns of the Geo. H. Morrill Printing Ink Company, who discussed *Ink as Used by the Daily Newspaper*. In reporting to the general meeting on Tuesday morning, Mr. Caldwell stated he had only one item to pass on as coming from the stereotype-pressroom meeting. He stated executives should permit the manufacturer to mix color ink since he has the facilities and equipment for doing it properly.

### *Tuesday Morning Meeting*

At the Tuesday morning meeting, Mac Sinclair, Editor of *Printing Equipment Engineer*, discussed *What's New in the Daily Newspaper Printing Field*. He told about the need for improved newspaper printing and better newsprint. As an indication of what present and embryonic publishers are thinking about he described the method for printing *PM*, the new daily which is scheduled to appear in June, the Hartford *Newsdaily* from the production standpoint, and the proposed new tabloid which will contain four-color pages every day. Among other new developments are experimental runs from plastic plates in place of stereotype plates, aniline color from zinc plates and the recently announced Velo cold-set ink process which is now on the market. He urged mechanical executives to keep records in such a way that they will be in a position to answer questions about costs by management, to check analyze work flow and production operations periodically.

W. L. Jones of the General Electric Company, Chicago office, discussed *Electric Drives and Controls for Newspaper Presses* and the new *Press Register Control*[1] recently developed by General Electric Company for the Philadelphia *Inquirer*. Mr. Jones stated that while the register control had been developed only for application to rotogravure presses for printing color, that in the near future application would be made to newspaper typographic color presses.

Following Mr. Jones, W. W. Warfel, Manager of the Chicago office of Chemco Photoproducts Company, explained in detail the Lengel All-tone Process. At the present time, 45 papers are using the process. Mr. Warfel mentioned that some licensees of the process have instituted variations by eliminating the halftone screen from type matter portions of the plates and are running them without the usual screened background. The plate sections are set in proper layout position and are cemented to the saddle or dummy press plate.

### *Officers Reelected*

All of the present officers of the Iowa Mechanical Conference were reelected. These are: Guy J. Chappell, Iowa City (Ia.) *Press-Citizen*, President; Charles H. Bleuer, Davenport (Ia.) *Democrat*, Vice President, and Paul Kamler of the Clinton (Ia.) *Herald*, Secretary-Treasurer. Davenport, Iowa, was selected for the 1941 conference.

### *Exhibits*

The following equipment and supply manufacturers had displays in the lobby of Hotel Martin: Hammond Machinery Builders, Ideal Roller Company, Ludlow Typograph Company, Milwaukee Saw-Trimmer Corporation, Mohr Lino-Saw Company, Monomelt Company, Harold M. Pittman Company, H. B. Rouse & Company, Wallin Mfg. Company, United American Metals Corporation and Webendorfer offset printing equipment.

[1] An illustrated article on the Automatic Register Control by Mr. Jones appeared in the January issue of *Printing Equipment Engineer*.

# CONTROL *of metal temperature ranks first in type and slug production—*

## *Ignoring it leads machinist to unnecessary work and loss of production*

**By STAFF WRITER**

IN discussing a subject like every day production of good type or line-composing machine slugs, one must refer to the ideal conditions under which the printing elements ought to be produced on a composing machine. How else could one set up standards for the making of solid type or slugs with sharp, clear letter characters? Everybody knows that it is impossible to maintain an absolutely ideal condition in a complicated manufacturing process like that of producing type composition. We do, however, find it necessary and desirable to set up standards by which to work. Then we try to maintain those standards as nearly as possible.

With reference to metal in the production of type matter we can set up some standards named in the order of their relative importance. The set-up would appear as follows:

I—*Metal temperature.*
II—*Metal ingredient maintenance.*
III—*State of wear and adjustment of the casting mechanism parts.*

Metal temperature control and maintenance of metal in proper balance, are the most important considerations in composing machine casting operation. Exact control of metal temperature is even

more important than *exact* maintenance of the proper proportions of tin, antimony and lead in type and line-slug metal. The reason is that the composing machinist who understands metal behavior, the behavior of metal and machine due to different or fluctuating metal temperatures, and the more or less defective condition of the casting mechanism parts and adjustments, for a time at least, can effect some kind of a compromise between metal, temperature and machine parts to secure passable type or slugs.

As is intimated above, metal temperature control probably *is* the most important requirement in the production of type or slugs from composing machines. The point is that when the metal temperature is maintained to the correct degree, immediately one possible major cause for defective type or slugs is automatically eliminated so that the machinist need concern himself only with the two other prime factors, *i. e.*, condition of the metal and the condition of the machine parts and adjustments.

It seems hardly worth mentioning here, but if, in addition to understanding the effects of and maintaining correct metal temperature on the composing machines, the machinist will see to it that his metal is remelted properly and that the manufacturer analyzes the metal at regular intervals so the working supply can be corrected as to alloy proportions, his metal hazards will be confined only to those mechanical troubles originating in the casting mechanism.

Metal manufacturers cooperate wonderfully in seeing that the customer's metal supply is maintained in balance, so the metal hazard will be passed over in this discussion.

### *Greater Production Insurance*

The greatest insurance against casting difficulties on composing machines is to anticipate possible causes of troubles by eliminating them. This means, of course, that metal temperatures in the machines should be checked regularly with a thermometer or pyrometer and a routine system provided for cleaning the pot crucible plunger and well and proper maintenance of molds, especially on line-composing machines. Wipers, mouthpiece jets, vents, adjustments in the casting mechanism, etc., should be inspected regularly. Keyboard, magazine and matrix care, distributor and general machine care at proper intervals will pay production dividends.

In a composing room in which effective maintenance control is not used but is being considered, it would seem to be more costly on the composing room overhead, but after providing the necessary machinist assistance to see that preventive work is done, it will be found that increased production more than offsets the additional expense.

### *Finding the Direct Cause for Defective Type Matter*

If the machinist fails to segregate the three major points in composing machine casting maintenance as given above he alone will be the cause of loss in type production as well as the making of imperfect type. For instance, because he fails to check metal temperature when he finds spongy type is being cast, he might at once conclude that the metal temperature is too high, when, as a matter of fact, the cause lies somewhere else. Lowering the metal temperature may remedy the difficulty partially but at the same time may cause imperfect letter characters to be cast. In lowering the metal temperature below the point where the metal is presumed to work best, he complicates his troubles by inducing imperfect faces and by back squirts caused by metal adhering to and solidifying on the metal pot mouthpiece.

On line composing machines, if back squirts persist, the machinist is at once apprised of the fact that the squirts are due to mechanical causes if he knows the metal melting and temperature control apparatus is functioning properly. He then may look for imperfect metal pot mouthpiece lockup which is due to faulty adjustment with the mold; foul plunger, mold warped out of true relationship to the mouthpiece, broken pot lever antifriction cam rollers or compression spring, metal collecting on mold base, or any one of several other causes.

If slugs are full of air bells, this condition may be laid erroneously to high metal temperature. If the metal temperature control device really is under control, the machinist will know that the light type slug structure is due to worn casting parts such as worn plunger or crucible well wall, both of which reduce the force of the metal injection into the mold, or to some interference in metal flow such as partially plugged nozzle on the type-caster, or mouthpiece jets, oxides collected in crucible throats, sluggish plunger action, insufficient air ventage on line-casting machine mouthpieces or to low metal level in the pot crucible. If conditions like these exist, the machinist eliminates metal temperature as a cause and concentrates immediately and with confidence upon correcting the faulty action of mechanical parts.

**MECHANICAL EXECUTIVES** are invited to send to the editor details about production improvement or mechanical development. Other executives will be pleased to know about them.

# PI SORTS *for line-composing machines centralized in rotatable rack in Cleveland Press composing room — How pi matrices were sorted from pi stackers*

**By STAFF WRITER**

THE problem of locating side sorts matrices in a composing room where there are only a few line-composing machines is no problem at all because operators seem to centralize responsibility for keeping them where they may be found when needed. In a plant of 34 line-composing machines operating two or more shifts, as at the Cleveland *Press*, an orderly arrangement of the sorts or pi characters is apt to become decentralized, especially where magazines on ad machines are shifted as occasion demands. Incidentally, it is not possible to affix metal pi boxes to the tops of the magazines as is done in plants where only the top magazine is changed because shifts at the *Press* may be made on all three frames in a machine at one time. Also, it may be stated here that approximately 19 machines are operated exclusively for advertising composition on the night shift alone.

In the Cleveland *Press* composing room, various schemes for keeping side matrix sorts in order have been tried from time to time. As has been stated above, the problem of keeping these sorts in some semblance of order is difficult of solution in a large composing room where the machines are operated at least two and frequently three shifts. Composing Room Superintendent James Kelleher (once an operator) consulted his machinist force. As a result of that conference, one of Chief Machinist Al Krueger's assistants, Hal Mowry came through with a proposal to construct a rotatable tray upon which would be deposited small wooden trays or boxes, suitably labeled, for holding the sorts matrices. The revolving rack was built as shown in Fig. 1 and was placed as nearly as possible in a central location to all of the machines in the ad alley.

All of the sorts matrices for a particular matrix font were placed in one of the small wooden trays. A label bearing the manufacturer's font number and the *Press's* markup code number was affixed to the box to enable the operator to identify the pi sorts for the particular font in use at the time. When the operator has finished using the sorts he removes them from the pi stacker returns them to the proper wooden tray and replaces the tray in the revolving rack. No pi matrices belonging in the trays are permitted to remain in the pi stackers. In this way, the operators know at once that if a certain tray is not to be found in the revolving rack that the sorts for a particular font are in use on one of the advertising composition machines.

**Fig. 1.—View of rotatable rack in Cleveland Press composing room adjacent to the ad line-composing machines. The umbrella-shaped rack is 48 in. square and holds 83 matrix trays, each of which contains all of the pi sorts matrices for a font of matrices. After magazine is changed, the operator picks up the tray containing the pi sorts for that particular matrix font, if needed. When he has finished his composition, he picks out the sorts from the pi stacker, places them in the small tray and returns the tray to its place in the revolving rack. No pi matrices are permitted to accumulate in the pi stackers.**

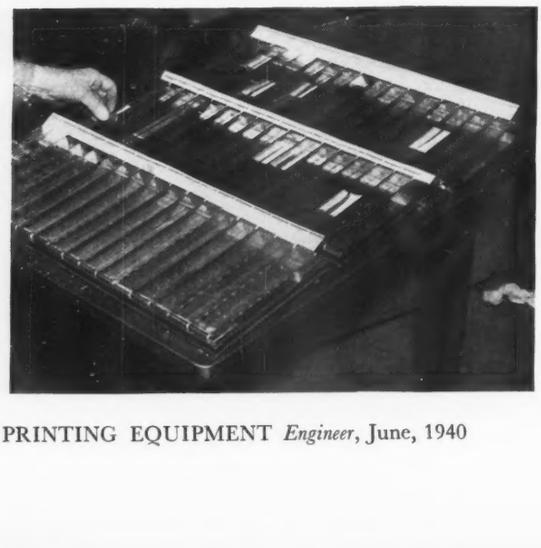


**Fig. 2.—These 4 col. galleys fitted with strip material partitions and labels for each compartment were used in Cleveland Press composing room to sort out all of the matrices from the ad alley machine pi stackers previous to placing the matrices in the trays shown in Fig. 1.**

**Here is shown an abbreviated portion of markup code used in marking up ads in Cleveland Press. Code symbols are at extreme right — manufacturer's symbols in second column from right. Both symbols are placed on labels attached to wooden trays for the rotatable rack described here.**

**——L & Li——**

| Machine | Pt. | Type Face | Mat. No. | Code |
|---|---|---|---|---|
| 1 | 8 | Bookman & Italic | 8-114 | L-Li |
| 13 | 10 | Bookman & Italic | 10-92 | L & Li |
| 16-25 | 24 | Bookman | 24-135 | L |

**——M & Mi——**

| Machine | Pt. | Type Face | Mat. No. | Code |
|---|---|---|---|---|
| 14 | 14 | Bodoni Bold & Italic | 14-68 | M & Mi |
| 15 | 18 | Bodoni Bold | 18-165 | M |
| 16-25 | 36 | Bodoni Bold | 36-65 | M |
| 16-25 | 30 | Bodoni Bold Italic | 30-123 | Mi |

**——N & Ni——**

| Machine | Pt. | Type Face | Mat. No. | Code |
|---|---|---|---|---|
| 1 | 8 | Bodoni | 8-262 | N & Ni |
| 16-25 | 18 | Cloister Light | 18-263 | N |
| 16-25 | 24 | Cloister Light | 24-223 | N |

**——O & Oi——**

| Machine | Pt. | Type Face | Mat. No. | Code |
|---|---|---|---|---|
| 3 | 10 | Bodoni & Italic | 12-218 | O & Oi |
| 4 | 10 | Bodoni & Italic | 10-218 | O & Oi |
| 2 | 12 | Bodoni & Italic | 12-160 | O & Oi |

**——PTI——**

| Machine | Pt. | Type Face | Mat. No. | Code |
|---|---|---|---|---|
| 30 | 8 | Light Face & Italic | 8-252 | PTI |
| 26 | 10 | Light & Italic | 10-24 | PTI |

The tray which is umbrella-shaped, is 48 in. square. It is constructed of thin wood, suitably braced underneath and is free to revolve upon the standard at a height convenient for best visibility. The standard is part of a discarded revolving magazine rack. A total of 83 matrix trays can be accommodated in the rack.

After it was decided to try out the revolving pi matrix sorts rack idea, the problem of gathering all of the pi sorts from the pi stackers and sorting them out arose. The work could be done by the machinists only between operator's calls. To simplify the process, Mr. Krueger devised a plan to make the work easy. As is shown in Fig. 2, three 4 col. galleys were placed on a truck in the machinist's department. Strip material was cut and placed on the galleys to provide a compartment for the pi sorts from each font. Labels bearing the manufacturer's font numbers were placed above each compartment. After the sorts for each font had been removed from the machines and placed in the temporary compartments in the galleys, they were placed in the wooden trays and deposited on the revolving rack, ready for use by the operators.

**A WELL KEPT MACHINIST'S BENCH** — *Nails for tool hangers have been discarded in the machinist's room at the tampa Daily Times, Tampa (Fla.). J. V. (Newt) Darnall, assistant linotype machinist, has tailored hangers individually. Hangers for three machinist hammers shown in photograph are made in one piece from ⅛ in. cold-rolled steel. The extension light on the bench was adapted by Mr. Darnall from an old lazy tongs telephone extension bracket from the foreman's desk.*

## Truck Caster Lubricating Problem Solved

CLEANING and lubricating the casters on newspaper form trucks is a problem. Usually, when someone is delegated to attend this duty, more than likely a page form is on the truck or a page may be partially made up which prevents tipping over the truck to make the casters accessible for cleaning and oiling. With the rolling jack shown in the illustrations, it is possible to raise a truck from the floor irrespective of type matter on the truck top.

The jack was developed in the composing room of the Tampa (Fla.) *Times*. The raising power is an ordinary automobile jack of the hydraulic type. The jack frame is made from 1½ in. by ⅛ in. angle iron, spaced with rod and pipe. In order to get a lowering distance of about 3 in., the jack was designed along the lazy tong principle. Two small rollers were applied to one end of the frame to facilitate wheeling the jack from truck to truck. The jack raises a truck approx. 3 in. from the floor. Lowering the truck is accomplished quickly by opening the release valve in the hydraulic jack.

**Machinist Lorne Hunsberger of the Tampa (Fla.) Times, rolls jack under newspaper form truck. After raising the truck 3 in. from the floor the casters will be accessible for cleaning and oiling.**

**Here the truck has been raised by the jack from the floor. It's easy to remove string, mop fibres and other things from the caster wheels.**

# Pressmen:

## *your skill is challenged by rubber printing plates*

**By CARL W. WURSTER**[1]

*Assistant Manager, Premier Printing Plates, Inc., Cleveland, Ohio*

MOLDED rubber plates for fine letterpress printing, have been used commercially for over eight years. At the time of their introduction it was apparent that a decidedly different technique of handling on the printing press would be required to obtain satisfactory printing results. After two years of experience, pressmen using this type of plate had evolved certain practices that were summarized in an early article[2] on the subject.

No change in the fundamentals has been made since that time. However, much valuable information has resulted from the intervening years of experience in the use of rubber plates. Pressmen have met the challenge of this new development with ingenuity and skill and have succeeded in obtaining remarkable printing results in hundreds of various applications. Experience is a valuable asset for a pressman when using rubber plates. Broadly speaking, good results are rarely obtained by pressman using this type of plate for the first time. Although many articles have been published on the subject of printing from rubber plates, they necessarily deal with generalities. The individual pressman must pick up this knowledge through actual experience.

Many conflicting claims concerning the amount of makeready required for rubber plates have been voiced. Obviously no general statement is justified on this point, because too many variables influence this factor. In metal plate printing makeready can be divided into two kinds, according to purpose — that required to effect an impression plane coinciding with the pitch plane and, secondly, that required to effect the desired printing value in various areas of the plate. With rubber plates the first type of makeready is essential to obtain good printing and long plate life. Because of their resilience, rubber plates do not adapt themselves readily to the second class of makeready, although differences in printing heights (as much as 0.003 in.) are sometimes used for this purpose. A minimum uniform impression over the entire form should be first obtained. Spotting up of the low areas should then be done to obtain a printing plane within 0.001 in. The makeready for rubber should be thinner and more centrally confined than for corresponding metal plates. As one pressman aptly expressed this procedure, "You start from nothing and then sneak up on it."

Rubber plates swell (increase in thickness) upon running because of the absorption of ink. Some authorities assert this swell and heating due to friction, to be as much as 10% of the plate thickness. Others estimate it as low as 3%. It is safe to assume an intermediate value of 6%. Thus, after a plate has been running long enough to become heated and absorb some ink (after approximately 5000 impressions) it is about 6% thicker and it is imperative to reduce the printing impression by a corresponding amount. By placing several sheets of tissue (0.001 in. thick) behind the draw sheet before starting the run, it is then possible to remove one or more of these sheets, as is indicated, to compensate for the increase in plate thickness (and resultant increase in impression). Throughout the run it is advisable to check impression and remove additional sheets when necessary.

There has never been any unusual difficulty in making molded rubber plates from properly etched halftone subjects, even of screens as fine as 150 line. The trouble has been, and still is, with satisfactorily printing them. The dots move or distort under pressure and hence it is not possible to overlay or makeready the various tones as is done with metal. Rubber plates of halftones of screens as fine as 100 line are printed frequently, but they possess a flat gray appearance that is not always pleasing.

More important even than makeready in the successful printing of rubber plates is the proper setting of the form rollers. They should ink the surface only of the plate. Excessive pressure at this point will materially reduce the life of rubber plates. It is advisable to use fewer form rollers, where this can be done. It is recommended to carry more ink and keep the rollers further away from the plates than to try to minimize the quantity and be forced to squeeze the rollers against the plates. It is generally conceded that rubber plates require about 40% less ink than would the same subject if printed from metal plates. It is therefore a good practise to use better quality inks for best results.

Rubber plates can be run with metal in the same form, providing the area of rubber is proportionately small. Rubber inserts, for example, are commonly used in a metal form. In such cases the inking and impression can be reduced for the rubber by making the surface of these plates several thousandths of an inch lower than the metal surface. It is not practicable to run large size rubber plates in the same form as metal.

Formerly, rubber plates of solids imparted hard edges to the impression, especially from non-shrink plates. This difficulty has been greatly minimized because the "retaining" materials are placed nearer the printing surface or exactly in the middle of the rubber plate. The tendency to curl along the surface is thereby reduced to a negligible amount or is equalized.

An efficient rubber plate cleaner introduced within the past few years is a light petroleum naptha. Naptha gas mixtures and carbon tetrachloride are commonly used for this purpose. Alcohol may be used but it does not remove the ink as quickly or completely. Rubber plates should be cleaned by wiping them with a lintless cloth moistened with the cleaner. Never pour the cleaner on the plates.

With the continual improvement of the rubber gums being manufactured, considerable increases in plate life have resulted. On rotary presses, runs of 1,000,000 impressions from type and open subjects and from 200,000 to 300,000 impressions from solids are not considered unusual when using oil inks. A much greater quantity can be obtained on rotary presses using aniline inks. The number of impressions possible from rubber plates on flat bed presses is unpredictable owing to the many variations encountered with individual applications.

[2] *Rubber Plates for Letterpress Printing* — Schwarz and Winkler — Fifth Conference Printing Industries Div. A.S.M.E., Oct., 1934.

# *Sampling Metals*

**By M. L. FRIDAY**[1]

A THOUGHT occurs to me which vitally interests every mechanical executive and is very much misunderstood — the analysis of type metal samples. Many carefully made analyses have been discredited by improper sampling.

A composing room sample, for general check purposes, should consist of eight or ten slugs, taken one each day from the floor, over a period of a week or ten days.

Stereotype metal samples may consist of saw cuttings or a corner of a plate. This is not so important, because the bulk of the metal is under heat at some time.

In sampling a pig or ingot of metal, a thin slice taken from the middle, representing a full cross-section, is good. An ear of a pig of stereotype metal or the end of a feeder bar of machine metal is not representative.

Another cause of inaccurate analyses, made in general testing laboratories, is lack of experience in this special field. We have come in contact with a number of tests, made by schools of chemistry in fine universities, which were positively weird. This is no reflection on the method used, but we are merely pointing out that experience is required in this special line to get reliable results.

[1] *E. W. Blatchford Company, New York. Abstract of address at 1939 P. N. P. A. Mechanical Conference, Harrisburg, Pa.*

### *Western Sales Manager*

John F. Devine, General Manager of The Fuchs & Lang Mfg. Company, Division of General Printing Ink Corporation, announces the appointment of William H. Engelmann as Western Sales Manager, with headquarters at Chicago.

# A Program *for the Improvement of Newspaper Advertising Reproduction — How it is proposed to accomplish the program — Suggested use of "Island" or round dot*

By PETER SCHOTANUS*

*President, The Rapid Electrotype Company, Cincinnati, Ohio

LAST year, advertisers in this country spent an estimated half billion dollars for newspaper space in which to publicize their goods and services. Added to this huge sum were the additional expenditures which mean bread and butter to the artist, photographer, engraver, typographer and electrotyper. With such a vast market at stake, is it not logical that processors should band together to protect their interests and to co-ordinate their work in order to give the newspaper advertiser better value for his dollar? That is the exact premise from which we at Rapid have proceeded in an endeavor to lend some guidance to a hitherto somewhat disordered array of processes.

In the past, when trouble has come up in connection with reproduction of newspaper advertising, this confused condition resulted in a passing of the buck all along the line — from the newspaper to the electrotyper — from the electrotyper (yes, from the electrotyper) to the engraver — and so on.

This buck-passing, too, may have been only logical, since no one processor could be sure exactly what was wanted of him by the processor next in line. Or, if individuals did know, perhaps the industry as a whole was in the dark.

## *Like An Assembly Line*

Actually, the situation has been somewhat comparable to an automobile assembly line where no one knew exactly what nut to turn for his operation.

This is an exaggeration, of course, since the graphic arts processors who make up the newspaper advertising assembly line have succeeded in making their car run after assembly. And to the tune of the before-mentioned half billion per year!

One thing we do believe, however, is that the skills of the individual processors have grown more in the past ten or fifteen years than the quality of the final newspaper advertising reproduction which is a total result of those skills.

In short, we of the graphic arts industry are able to deliver more, by way of crisper, cleaner reproduction, to the newspaper advertiser than we are now doing.

## *Everyone Does His Part*

And by that, we do not mean to infer that there are those who shirk their part. It is simply that while each of us — artist, photographer, engraver, typographer and electrotyper — may do his part as best he sees it — we do not see it clearly enough in relation to the ultimate end — newspaper reproduction.

Reverting again to our auto assembly analogy — in the days when tolerances were not so fine as they are today, before we began speaking in thousandths of an inch and fractions thereof — newspaper printing was crude and simple compared with the high speed, multi-operation process of today.

Likewise, the people who preceded the newspaper printer — the artists, photographers, engravers, typographers and electrotypers — were not doing work comparable with that made possible today by refinement and perfection of machines and techniques in the meantime.

And as the intervening processes between the envisionment of an advertisement in an advertising man's mind and its appearance in the newspaper have grown increasingly more and more specialized, so have the chances for trouble increased apace. In short, the finer the machine, the less required to throw it out of balance.

## *Co-ordination Is Necessary*

The only apparent answer to the situation is that someone within the graphic arts field itself must set up standards or recommend ways and means of co-ordinating all the highly skilled parts of this machine in order to allow it to do its best possible work.

It must come from within because the advertiser is not interested in the causes — he is interested onlx in the result. He is interested only in fool-proof newspaper advertising — newspaper advertising that is crisp and clean — every time.

## *How We Propose To Do It*

It may seem strange to the people outside the graphic arts field that the initiative in this move toward co-ordination comes from an electrotyper, who is, after all, only a duplicator.

Among the processors, however, no one is closer to actual newspaper presswork than the electrotyper. And it is on the newspaper press that the work of every single processor — artist, photographer, engraver, typographer, and electrotyper — meets the supreme test.

Only an electrotyper could be so well acquainted with the intricate mechanical requirements of newspaper presses. Only an electrotyper of long standing experience — a specialist in the newspaper ad plate field — could have the necessary wide background[1]

Therefore, we at Rapid Electrotype Company have taken the responsibility of assuming at least the spearhead of the attack on the problem.

We have, in the past six months, made an intensive study of this problem. Part of the results of this study — a recommended increase in depth of engravings intended for newspaper use — has been released and, we are glad to say, has met with great approval.[1]

It is gratifying to note that some enthusiastic members of the graphic arts have gone so far as to apply our recommended depths to engraving for commercial printing. Our depths, of course, are focused entirely on the problem of newspaper reproduction. It may be that they will have possibilities in the improvement of commercial printing, as well. But this is a matter for further consideration.

The other parts of our study are now ready for release. We have included our findings in every field — art, photography, engraving, typography and lockup — in a forty-page book called The Rapid Way, which is now ready for distribution to newspaper men, agencies, advertisers, and all members of the graphic arts field who wish copies.

**William J. Acker discusses Typography Begins Its Sixth Century, commencing on page 6 this issue Printing Equipment Engineer.**

Offhand, it sounds as though we have undertaken a rather huge order. That a mere electrotyper should be able to tell artists, photographers, engravers, typographers and lockup men what to do and what not to do may seem a bit presumptuous until you have read this book.

You will find that we do not attempt to do any other thing than say "This will print well in newspapers. This will not. And here is the reason why."

## *Recommendations Only*

In no single instance have we said "This cannot be done," or "Only this should be done." Instead, we have posed our findings as recommendations, only. But we hope and believe that these recommendations will serve as guideposts in the future, not only for people in the graphic arts, but for agency production men as well.

In the field of typography, for example, we have not picked out certain specific typefaces for praise and others for blame. Instead, we have simply pointed out characteristics of good type

[1] "We Request a Change" — *Photo-Engravers Bulletin*, March, 1940, p. 12.

for newspaper reproduction, and characteristics of bad type. Then we have proved our points as we went along, with inserts on actual newsstock.

### *Concerning Engravings*

We have not been satisfied, in the field of engravings, to say simply, "Make 'em deeper." Instead, we first polled newspapers all over the country to determine what depth losses were being sustained by them. Then we added that to the depth losses which we knew were sustained in electrotyping, or matting and stereotyping. Not satisfied, we went to engravers to find out whether our demands were unreasonable and found that they were not.

Nor, as one of our fellow electrotypers agrees, was mere publication of a new set of depths enough. We have gone into the engraving problem rather thoroughly, with a complete discussion of such things as nature of the etching and its relation to the quality of the final newspaper printing. The mushroom or undercut dot, the dirty bottom and the ideal or pyramid dot all come in for their share of comment. In addition, we discuss a new kind of dot — the island dot, which may be the solution to a great many newspaper engraving problems.

### *The Island or Round Dot*

This island or round dot has a characteristic circular shape as contrasted to the square shape of the conventional halftone dot now being used in most newspaper advertising halftones.

By doing away with all corners, the island dot also eliminates the chaining up effect which begins in the square dot at about a 45% density. This elimination of the chaining up makes it easier for the engraver to get a deeper average etch in the middle and three-quarter tone densities where deeper etching is so vital to good newspaper reproduction. By getting this deeper average etch all around the dot, the shallow bridges of the conventional square dot are also eliminated.

It is these shallow bridges which so often print up in current newspaper printing. They begin even before the square dot chains up and make it impossible for the engraver to get a deep etch without destroying the contour of the dot. Then, in electrotyping, matting and stereotyping, the bridges come to the surface and print up, muddying or mottling the middle and darker tones.

A pictorial explanation of the island dot as it applies to newspaper work is found in our book and also in a six-page newspaper size, newspaper-printed folder which is available at our booth (No. 77) at the ANPA Mechanical Conference. This newsprint folder is most interesting, since it was printed under conditions approximating actual newspaper printing. Two full-page illustrations made from 20 screen halftones make the effect of the square and island dots evident to the naked eye. Two other smaller plates of the same subject, reproduced in 60 screen (a typical newspaper screen) show the effect of the dots in actual printing.

We believe the round dot to be ideal for certain types of newspaper photographs, especially where contrast must be strengthened, and where darker tones prevail. It is applicable to the majority of newspaper work with much advantage over the conventional square dot. The engraver can be relied on to know when and when not to use it. If there is any question or doubt, we will be only too glad to work with any engraver who wishes to apply the island dot to newspaper plate work.

### *Or Artwork*

We have not gone long-haired and set ourselves up as art critics. We have merely pointed out certain common-sense precautions which can be taken to assure that artwork and photographs will get the best possible break in newspaper reproduction.

And before we touched the subject at all, we consulted with the art director of one of the largest accounts in the advertising business, as well as quizzing the newspapers for their opinion on certain types of artwork and photography.

Some people may question our motive in giving all this material broadcast to the newspaper advertising field as a whole. Since it represents forty years of experience in the newspaper ad plate field, plus the result of some good hard digging, why not, they may reason, keep it in the family as a trade secret.

To this we can only answer that we do not think this is the time to hold back anything which may help to stimulate an entire industry to the progress of which it is capable. We sincerely believe that the newspaper advertising field is capable of tremendous progress.

Therefore, we have purposely left the copyright off our book and welcome use of any of the material in it to further co-operation among members of the graphic arts field who have to do with newspaper advertising. For we believe that if we all co-operate to offer the newspaper advertiser more for his dollar, we can expect more of his dollars!

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### *Combination with Offset and Rubber Plate Press*

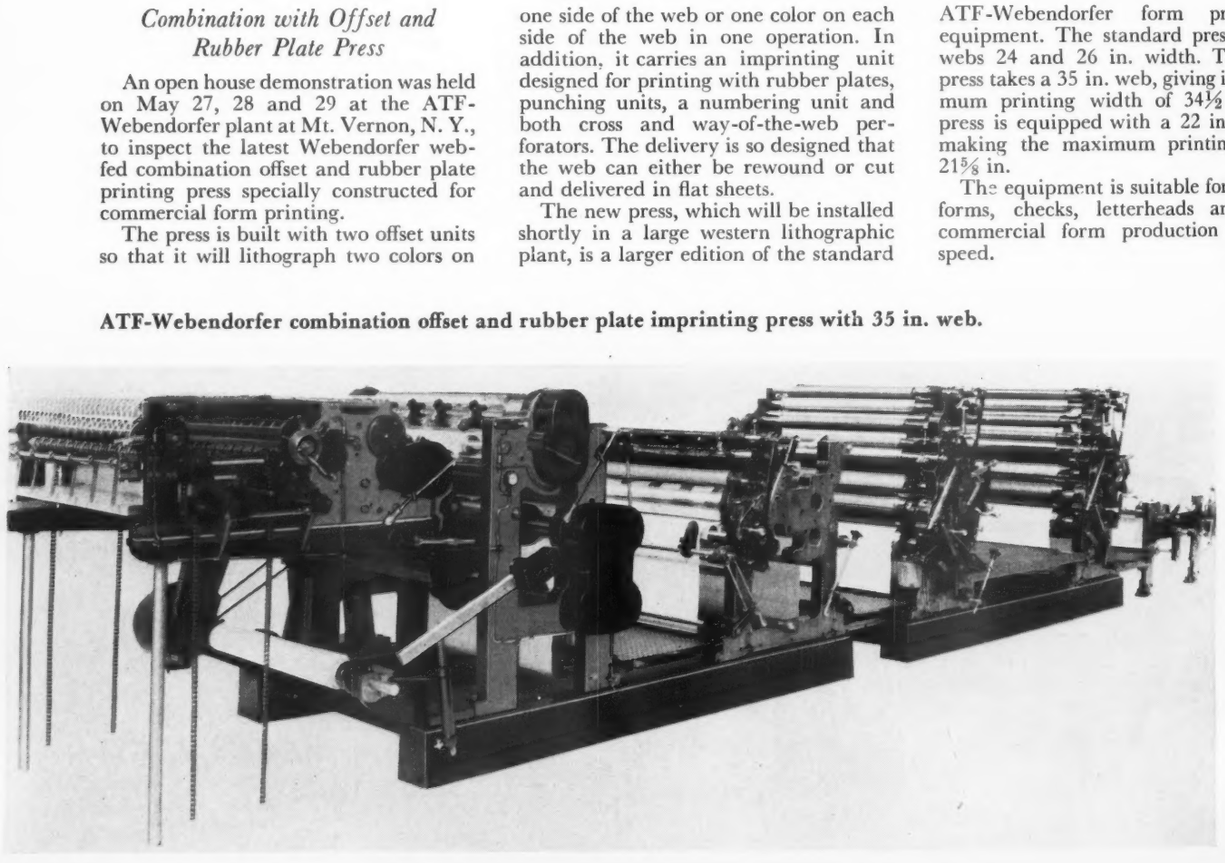
An open house demonstration was held on May 27, 28 and 29 at the ATF-Webendorfer plant at Mt. Vernon, N. Y., to inspect the latest Webendorfer web-fed combination offset and rubber plate printing press specially constructed for commercial form printing.

The press is built with two offset units so that it will lithograph two colors on one side of the web or one color on each side of the web in one operation. In addition, it carries an imprinting unit designed for printing with rubber plates, punching units, a numbering unit and both cross and way-of-the-web perforators. The delivery is so designed that the web can either be rewound or cut and delivered in flat sheets.

The new press, which will be installed shortly in a large western lithographic plant, is a larger edition of the standard ATF-Webendorfer form production equipment. The standard presses carry webs 24 and 26 in. width. The latest press takes a 35 in. web, giving it a maximum printing width of 34½ in. The press is equipped with a 22 in. cut-off, making the maximum printing length 21⅝ in.

The equipment is suitable for snapout forms, checks, letterheads and other commercial form production at high speed.

**ATF-Webendorfer combination offset and rubber plate imprinting press with 35 in. web.**



# DECALCOMANIAS—*Some technical information about production methods used in this highly specialized lithographic printing process*

**By ADAM HENRI REISER**

## PART I

DECALCOMANIA is the art of transferring pictures from a specially prepared paper to surfaces of glass, porcelain, pottery, etc. It is said to have originated with two Austrians, and finally found its way in 1862 to the U. S., where in Philadelphia the first decalcomania company was started. The term is also used to designate the pictures used in this transfer, the abbreviated form "decals" being popularly employed. Fundamentally a decalcomania is a design lithographed to paper which permits its transfer to other surfaces. The paper may be of a "simplex" nature, just a single sheet, or it may be of the "duplex" type, a double layer of paper.

Lithography is the printing medium predominantly used to produce all forms of decalcomania. Collectively, the number of houses lithographing decalcomania work is small, and to my knowledge, not many of these have experimented with its highly specialized production on the offset press. Especially is this true of ceramic decalcomania. Few firms have the patience or necessary capital to invest in experimentation in that direction.

### *Straight Decalcomania*

Broadly, there are three types of decals. Decals may be, first, the straight decal. This is the type represented by the pictures children paste on the backs of their hands, your best table, or even the windows if no one is looking. It is the work that is litho'd to a backing sheet containing a water soluble coating usually composed of starch, gum or paste ingredients. Some have used collodion coatings. Work is lithographed backwards so that when the transfer takes place, the resulting print will read correctly. To effect the transfer of the design to a new surface, the back of the paper is moistened with water, penetration dissolving the soluble coating, and permitting the design's release and transfer.

On the cheaper of this class of work, regular color sequence is followed in printing: yellow, red, black and blue being the order. It is customary, however, to reverse the printing order, black going on first to be followed by blue, red, yellow, and so on. In some cases there may be an allover white printed to the sheet. A protective film of lacquer or varnish may cover the entire design, one film being put to the paper before lithographing is done, and the final layer being put over the last color. The silk screen process may be used for this last layer.

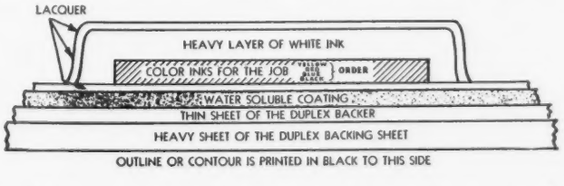

LACQUER
HEAVY LAYER OF WHITE INK
COLOR INKS FOR THE JOB
YELLOW RED BLACK
ORDER
WATER SOLUBLE COATING
THIN SHEET OF THE DUPLEX BACKER
HEAVY SHEET OF THE DUPLEX BACKING SHEET
OUTLINE OR CONTOUR IS PRINTED IN BLACK TO THIS SIDE

**Fig. 1 — Duplex paper type of decalcomania shown in cross-section diagram. The stiff backing sheet holds a thin translucent sheet which in turn carries the design.**

There are variations of this type of decal. That on duplex paper (Fig. 1) is one specialty. On this the stiff backing sheet holds a thin translucent sheet which in turn carries the design. This is litho'd wrong way up; that is, with the black as the first printing, followed by the blue, red, yellow, and then sufficient layers of white to make it opaque. No colors, however, extend beyond the outline, called "contour", which has been litho'd to the rear side of the backing sheet, usually in some light color, grey or light blue. The contour represents the actual job limits when the design is slid off the backing sheet.

Of course in this case the translucent sheet holds the water soluble coating. Used for a large subject, truck lettering, bus decorations, designs, etc., cement is first applied over the printed design, dried, and the thin sheet removed from the backing sheet by application of water. Placed cement side to the new surface, the whole is then squeegeed flat with a rubber roller or some such device. When the design is firmly positioned, the thin paper is removed with a water sponge, containing a soapy water solution.

### *Slide Offs*

The second type of decal is commonly referred to as *Slide Off*. These are used for wall decorations, wood grain designs, etc. Here again the work is lithographed to a backing sheet of a nature similar to the first, but different methods of lithographing the design to the sheet are employed. Usually in this case white is the first color down. It may be an allover impression as in the case where window displays are to be die cut. White then covers the entire paper area, die cutting taking care of the outlines of the subject. A coating machine is used to coat the sheet with the white layers.

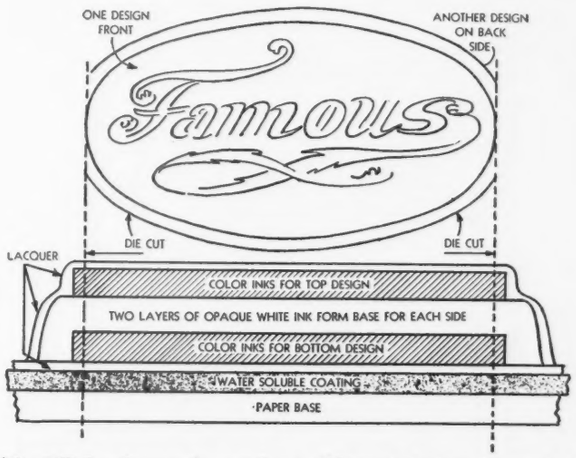



**Fig. 2 — Slide Off decalcomania carries a different design for each side, i.e., if mounted upon the glass of a door, a different design appears upon either side. The intermediate heavy white film makes an opaque background which does not permit passage of light. Therefore, the image does not shine through.**

Where jobs are straight outlined, and where the subject limits may lie well within the outlines, white will just be lithographed within the subject limits. White for this is drawn on the original, so as to run within a line of the outline of every part of the design. Colors are litho'd over this white; the whole being followed by a coating of protective varnish, or, usually lacquer right up to the straight outlines of the entire work.

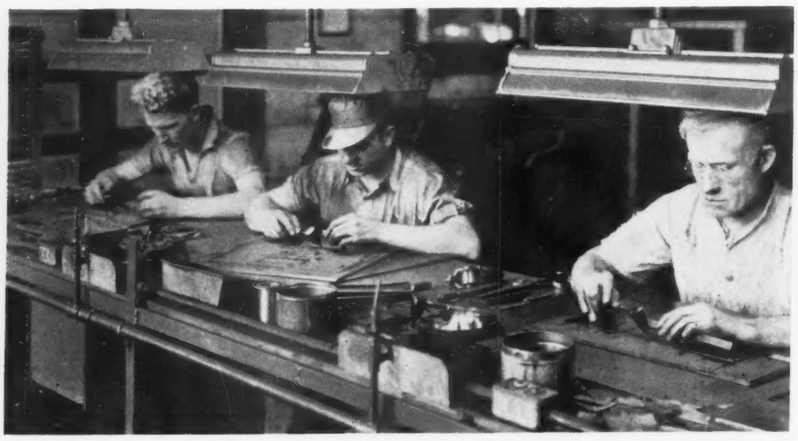
More complicated slide offs are started with a printing of the contour on the reverse side of the backing sheet. A complicated and expensive type of decal slide off (Fig. 2) is that which contains a different design or message on each side of the decal. Pasted upon a window, this decal conveys two messages when seen from opposite sides of the store door. One side of the advertisement may give the

(*Continued on Page 53*)

# The Fluorescent Lamp in the Printing Industry

By DEAN M. WARREN*

*General Electric Company, Nela Park, Engineering Department, Cleveland, Ohio.



**Mounted 18½ in. above the task, these fluorescent units provide these electroplaters with 80 footcandles of well-diffused illumination.**

THE fluorescent lamp offers another lighting tool for providing the amount of light and the quality of lighting needed for the critical seeing tasks performed in the printing industry. The lamp has several outstanding advantages to recommend it: (1) It produces light of daylight color quality; (2) It permits higher levels of lighting with existing wiring, provided power factor correcting equipment is used at the lamp, and (3) it produces cooler illumination—an important factor in obtaining high level lighting with comfort. One hundred footcandles are now entirely practicable from this standpoint.

Daylight quality illumination has long been a dream of the research man. The daylight Mazda F lamp is the dream come true for the light from this source is the nearest approach to natural daylight that it has ever been possible to produce directly by a practical artificial illuminant at high efficiency. It is being used in the printing industry for many seeing tasks like letterpress, offset and gravure plate-making operations, composing room applications such as illumination of compositor's cabinets, proof presses, makeup tables, proofreader's desks: for checking color proofs against originals and other important applications in the production department of printing plants.

These tasks require high levels of lighting of good quality which can be provided by fluorescent lamps in suitably designed reflectors. Because the radiant heat from fluorescent lamps is only one-quarter that of filament lamps for equal footcandles, this source can furnish several hundred footcandles without the discomfort from heat formerly associated with high footcandles. Experiments with blindfolded subjects indicated that the average minimum level of illumination which they detected by a barely noticeable increase in the sensation of warmth was 600 footcandles for light from Mazda F lamps and 125 footcandles from light from tungsten filament lamps.

**Three 30 W. daylight Type F lamps provide 100 footcandles of cool daylight for this difficult seeing task in the pressroom.**

### *Operating Precautions*

The fluorescent lamp is designed to give its best all-around performance within the specified voltage range. Lowering the voltage will not necessarily increase the life of the lamp as is the case with filament lamps, because such treatment places a greater burden on the electrodes, causing them to operate too cool and to be bombarded too severely. Excessive voltage causes a shortening of the life because of the more rapid use of the active material on the electrodes. At present it appears that from the standpoint of life the lamps should not be operated at voltages less than 105 (210) or more than 125 (250), and wherever possible they should be burned within the recommended range of 110 to 125 (220-250) volts.

In general, the lamps lose their usefulness because of decrease in light output before they fail to operate. Darkening of the bulb occurs because of the effect of mercury on the fluorescent coating and because of the material given off by the electrodes. The latter especially causes darkening at the ends of the bulb late in life. The rate of depreciation in light output diminishes throughout life; the first hundred hours produce about as much darkening as the following 1000 hours. Rated output is based on conditions after 100 hours.

Frequent starting of lamps may take more out of the electrodes than long hours of burning because momentarily there is a higher than normal voltage drop at the electrodes which causes the active material to sputter or evaporate off.

During about the first 100 hours operation, the light output from Mazda F lamps drops rapidly, the decrease being as much as 10%. For this reason the rated light output values are based on readings taken after this initial loss has occurred. Since the output from new lamps is considerably greater than published values, footcandle readings taken shortly after making complete installations of new lamps may be somewhat higher than the illumination level designed on the basis of rated lumen output.

### *Recent Auxiliaries*

The February issue of *Printing Equipment Engineer* called attention to the

(*Continued on Page 102*)

## DECALCOMANIAS

*(Continued from Page 51)*

name, trade mark and picture of the product, while the reverse side as seen from the other side of the door may bear some slogan or catchy suggestion.

To produce this type of double face transfer, one face is lithographed wrong way up; that is, starting with the black again as in the specialty case mentioned a few paragraphs back. Other colors follow to the yellow and then two heavy layers of allover white are coated to the sheet. This makes a layer almost as thick as a sheet of writing paper. Then follows lithography of the opposite side with the regular color sequence, or one which suits the job best. The usual lacquer follows after which the job is die cut and ready for transfer.

Slide off decalcomania represents a kind of lithography that calls for considerable planning. A printing of white underlies each color that is lithographed on the job. Therefore, in a nine color job, there may be more than seventeen actual printings; nine representing the colors; eight for layers of white underlying the colors; and two or three more operations for lacquering, and allover white coatings. In addition it may be necessary to run some colors more than once to get smoothness and depth. Black, reds, blues and greens usually get a double printing; blues in some cases three. Transparent tints sometimes offer the same problems. Of course where fine lines are part of the design, repetition would be suicidal, one printing necessarily accomplishing the desired end. In slide off work, black and the darker colors usually are run last.

The main function of the many printings of white is that of furnishing body to the decal, providing by that means material for a strong transfer. It also serves to make opaque the colors that follow the white.

Most decals are lithographed to the specially prepared aforementioned water soluble coating on backing paper. There is, however, another coating which is water resistant, composed of alcohol and gum sandarac, and which is sometimes used instead of the water soluble coating. When this is employed, the decal is removed from the backing sheet by a solvent such as gasoline. But regardless of the type of coating, the principle of decal involved is the same.

The lithographed decal actually lies between two layers of tough varnish or lacquer. This protective coating enables the design lithographed in from six to twenty or more printings to withstand the ravages of periodic washings it is often subjected to in displays that have been transferred to store windows.

Thus far we have mentioned two main types of decalcomanias used for transfer to mediums without further treatment. That is to say the decal is printed in inks that retain their identity as to color and strength after the transfer, whatever the new support may be. In the next instalment, production of the third type: Ceramic decalcomania, will be discussed. The conclusion will include trade skills required in this work, and include mention of some of the difficulties encountered in lithographic decal production.

(END OF PART I)

*To Be Continued*

## Takes Own Medicine

To do something to raise the standards of printing and typography by larger corporations, President Thomas Roy Jones of American Type Founders, makes his report to stockholders in two brochures. The one brochure containing the regular financial statement, consists of eight pages and cover. The other, entitled *Your Company in Review*, consists of 16 pages and cover. Both brochures are 8½ in. by 11 in. and are printed by letterpress in black and color with numerous illustrations and art work.

*Your Company in Review* section of President Jones's report presents an intimate picture of company policies, purposes, management and its products, so that the stockholder may have a realistic picture of what his company is doing and how it is done.

In a foreword, Mr. Jones explains the disappearance of the individual owner-manager from industry who has been replaced by professional business executives specially trained in the duties and responsibilities of management. Ownership has passed into many hands (stockholders) and it is Mr. Jones's thought that by presenting the company's story in brochure form as described above, relations between company and stockholders will be closer.

### *Heads Ink Company*

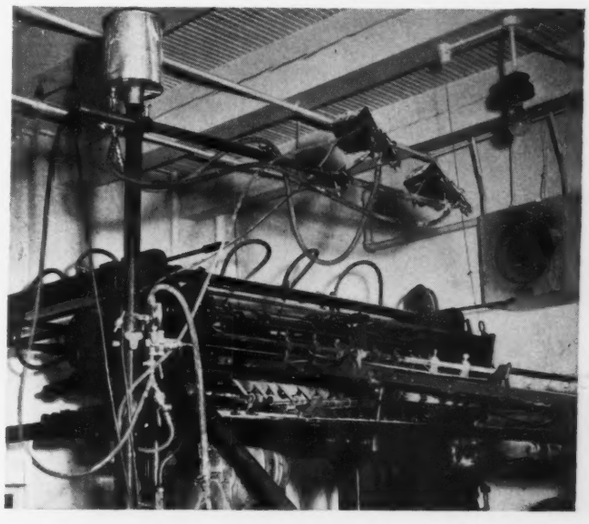
John J. Fields, 3rd, who has been actively managing the William C. Herrick Ink Company for the past two years during the illness of Mr. Herrick, has been elected president of the company. Associated with Mr. Fields in ownership of the company are P. O. Roberts, J. C. Menke, D. A. Robbins and E. K. Abbott. Mr. Fields stated there would be no change in company policy and the business will be continued in the same way.

**John J. Fields, President of Wm. C. Herrick Ink Company.**

### *Static Elimination*

HERE'S an item for your note book next winter. That is, it's an item if your plant is not air conditioned and an extended dry-cold season prevails. Pressroom Foreman Frank Shuttera of A. S. Gilman, Inc., Cleveland, recently was called upon to print a one-color (green) and black catalog page upon a fairly good size sheet. The pages contained all-over solids and were printed from rubber plates. Static in the paper caused trouble in press delivery — in fact, there was so much of it that the sheets not only couldn't be made to deliver properly but couldn't be jogged.

Mounting a spray gun above the feeding mechanism of the press and spraying the sheet with water solved the problem by eliminating the static electricity, and made it possible to maintain register as well as keeping the sheets flat for jogging.



**This spray gun mounted above the press feeder sprayed water on the sheets to eliminate static electricity during an extended cold season in a Cleveland printing plant.**

# *Beautiful Building* for Chillicothe (O.) newspapers designed along historical lines — Summer and winter air conditioning, glass block, and wood block flooring in mechanical departments

**By STAFF WRITER**

DESIGNED as a replica of the first capitol of Ohio, work on a new home for Chillicothe (O.) newspapers is now in progress. Plans for the new publishing building of the Chillicothe *Gazette* and *News-Advertiser* were announced recently by Merritt C. Speidel, President of Chillicothe Newspapers Inc., and J. K. Hunter, Treasurer and Publisher. Combining modern efficiency with early American architecture of great local historical interest, these features will be incorporated in the new plant. Beauty of design, ideal working conditions, maximum efficiency for operation, provisions for the utmost in healthful surroundings, comfort and convenience for patrons and employes alike.

Because the state house was built in 1800, the year the *Gazette* was founded, the new building will give the community a lasting memorial of those early days when Chillicothe was the capital of the Northwest territory and the first capital of the state of Ohio.

Ground was broken early in May on the West Main street lot formerly occupied by the *News-Advertiser*. On that site, when buildings were removed for the construction of the *News-Advertiser* plant in 1923, was discovered, still standing, part of a log cabin which had been erected in 1797. It was older than either the *Gazette*, now in constant publication for 140 years, or the *News-Advertiser*, which dates its founding 110 years ago.

The lot has a 60-ft. front footage and extends 198 ft. in depth to the cross alley. The structure itself will have a 55-ft. front, parallel with Main Street, and will extend approximately 150 ft. deep along the alley.

The front part of the building, housing the offices, will be of two-story stone construction. Brier Hill stone was selected to match the stone used in the original Ohio state house. Two stones from that historic building will be placed in this modern structure, one on each side of the entrance portico. A bronze plaque will be erected above each of these stones, one calling attention to the historical significance of the stones and the other bearing the names of the local newspapers.

The rear section, housing the production department, will be one story of brick and glass block. The basement will be under the entire building.

After visiting many modern newspaper plants, the owners placed the commission for the complete design and supervision of construction with Benham & Richards of Columbus, widely known architects experienced in the technical planning of newspaper plants.

After months of study by the architects and owners, many outstanding features have been incorporated into plans for the building. Chief of these, perhaps, will be a complete, automatically-controlled, heating, humidifying and ventilating air conditioning system of the latest type for summer and winter.

Under all conditions air will be filtered for purity and properly conditioned throughout the year without recourse to window ventilation, as all air used in the building will be brought in through an air intake shaft in the "State House" cupola.

To eliminate dust and dirt, and to assure constant air conditions, all window openings in the one-story part of the building will be glass brick panels, and double sash windows will be used in all offices.

The glass bricks used in the production department are no-glare blocks, 8 in. sq. by 4 in. thick. A fibre glass screen through the center reduces glare and improves working conditions by admitting diffused light. Use of these blocks eliminates all condensation, frosting, drafts and heat losses in winter, and, in summer, eliminates excessive sun rays, the use of screens or awnings. In all seasons there is assured absolute control of air conditions with uniform daylight under varied exterior weather.

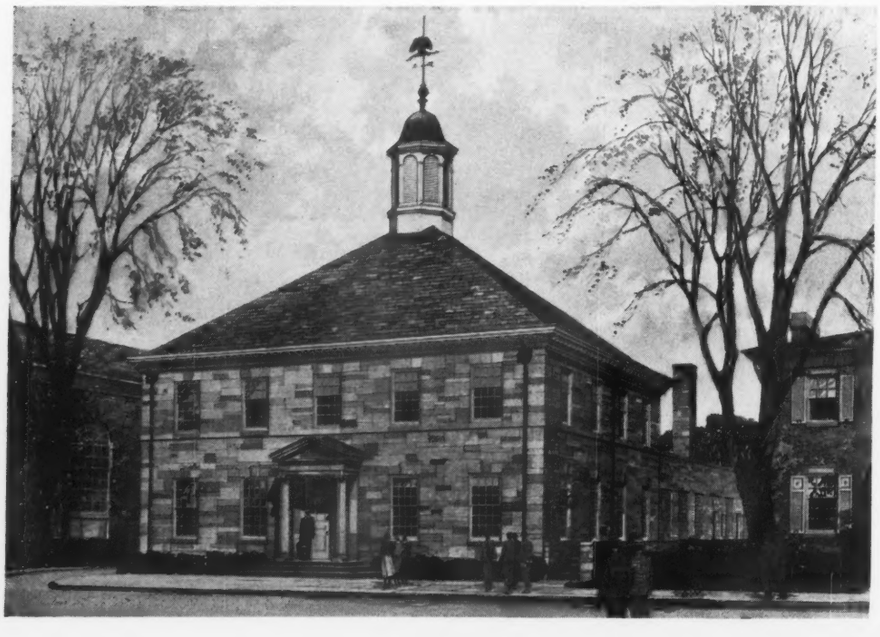
Further to assure uniform air conditions, so essential to the production department and the operation of the press, the building will be thoroughly insulated against heat in the summer and against cold in the winter. For sound insulation, ceilings throughout the building will be finished in acoustical sound-absorbing material.

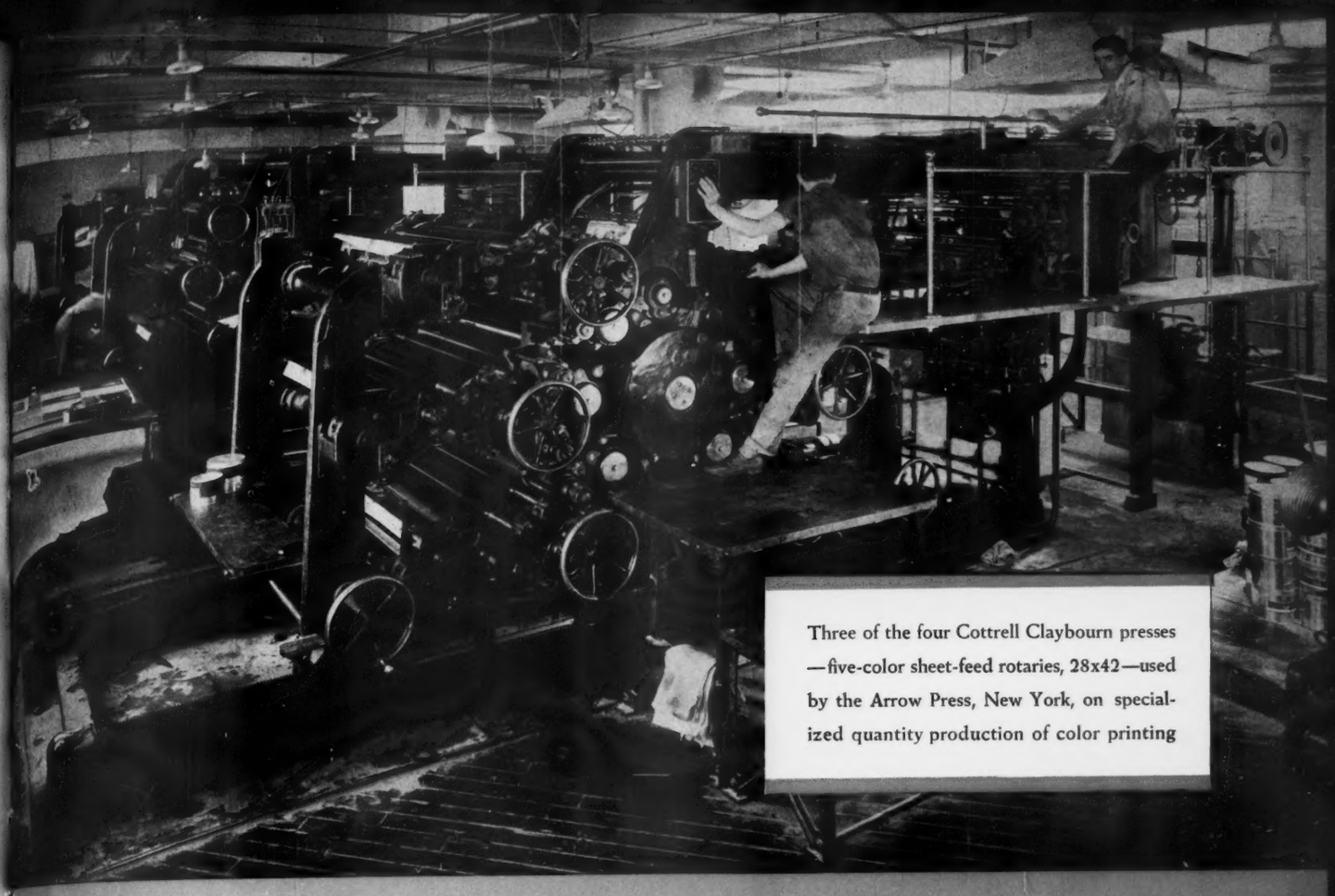
Main entrance to the building will be on Main Street, by way of a portico three steps above the sidewalk and massive-like double wooden doors. The portico is of colonial design to correspond with the general architectural style. The doors open into a marble-floored vestibule leading on into the public lobby.

Stained glass medalions, designed and made by Dard Hunter, which were preserved from the old *News-Advertiser* plant, will be used to decorate the transom above the front entrance and the flanking windows. These medalions depict the first state house, the seal of Ohio, and a scene symbolic of early printing.

To the east of the lobby will be the publisher's office, the business manager's

(*Continued on Page 100*)





Three of the four Cottrell Claybourn presses —five-color sheet-feed rotaries, 28x42—used by the Arrow Press, New York, on specialized quantity production of color printing

# SPECIALIZATION...

## *the key to profits in printing*

THE ARROW PRESS, New York, headed by Jacques Pollack, operates four Cottrell Claybourn five-color rotary presses, 28x42 sheet size, and specializes in color printing. A description of this plant appears in a current trade paper article written by Lewis Cass Gandy.

Cottrell and Cottrell Claybourn presses of this general type are available in a number of sizes, from 25 x 38 to 50 x 72. Speeds on the smaller presses range up to 5000 five-color sheets per hour—which means a net production greater than the running speed of any other press that will handle the same kind of work.

For handling four-color process work, plus an additional flat tint, metallic ink, or any other extra impression that may be necessary, these presses are unexcelled. They produce first-grade work at prices which are attractive to national advertisers. They give you the accurate register which is characteristic of rotary printing and the unsurpassed brilliance for which Cottrell Claybourn color presses are well known. Write for complete particulars.

**C. B. Cottrell & Sons Co., Westerly, R. I.**

NEW YORK: 25 East 26th Street · CHICAGO: 400 West Madison Street

CLAYBOURN DIVISION: 3713 N. Humboldt Ave., MILWAUKEE, WIS.

SMYTH-HORNE, LTD., 1-3, Baldwins Pl., Gray's Inn Road, LONDON, E. C. 1.

COTTRELL CLAYBOURN
2-4-5-COLOR
ROTARY PRESSES

Cottrell

# *Keyboard Cleaning* of line-composing machines at Cleveland Plain Dealer executed efficiently in minimum time—Maintenance methods provide trouble-free keyboard operation

By STAFF WRITER

THE operation commonly referred to by line-composing machinists as "cleaning keyboards" does not mean that the entire keyboard is to be removed from the machine pedestal. Complete removal of the keyboard parts from the machine for overhauling and cleaning is not undertaken in most composing rooms more often than at yearly intervals. In fact, in many plants, it is not possible to undertake this work at yearly intervals even though it is essential. Cleaning and lubricating the keyboard cam yoke frames and cams, however, should be undertaken at 3 month intervals for best keyboard response.

Like anything else, keyboard cleaning methods and the time required for cleaning a keyboard properly have been improved from time to time. This article, together with accompanying illustrations, will describe how keyboard maintenance work only is handled by Cleveland *Plain Dealer's* Chief Composing Machinist Herbert Lind.

It is not the purpose of this article to relate in complete detail all of the essential operations entering into line-composing machine keyboard maintenance. We will describe only those methods used by Mr. Lind which are an improvement over the older methods employed in keyboard maintenance. Mr. Lind makes no claim for originality in all of the methods described, but states he feels these methods do represent the most efficient means for dependable and trouble-free keyboard operation.

The expenditure of a great amount of time in cleaning the keyboard cam yoke frames and cams is not required. In fact, this operation may be done in approximately 1 hr. 15 min. or at the most 1 hr. and 30 min., provided the cams have been kept in good routine condition.

Before discussing the actual method of cleaning the keyboard, it should be mentioned that where the brass surfaces of the cam yoke frames, triggers, yokes and cams have become oxidized and are very dark in color, Mr. Lind immerses the parts in a chromic acid base cleaner to restore the bright brass finish and to remove accumulated oil, rubber particles, dirt and grease. Any one of the cleaners having a chromic acid base and which is obtainable from several sources, is suitable for the purpose. After having been brightened in this manner, it will not be necessary to repeat this operation except at two or three-year intervals, or after the bright surfaces have again become dark in appearance.

First, of course, the cam frames are removed from the keyboard, the rubber roll shafts are withdrawn from the frames. The next operation is to remove the yoke bearing bar (Intertype) or hinge bar (Linotype) with cams assembled.[1] The idea is to avoid extra work entailed in removing, handling and returning each cam separately.

The next step is to immerse the cam yoke hinge bar (Linotype) or bearing bar (Intertype) in the cleaning fluid, as shown in Fig. 2. The cleaning fluid may be Mineral Spirits, Varsol, High Test Gasoline, or perhaps any other solvent used in the composing room which is not

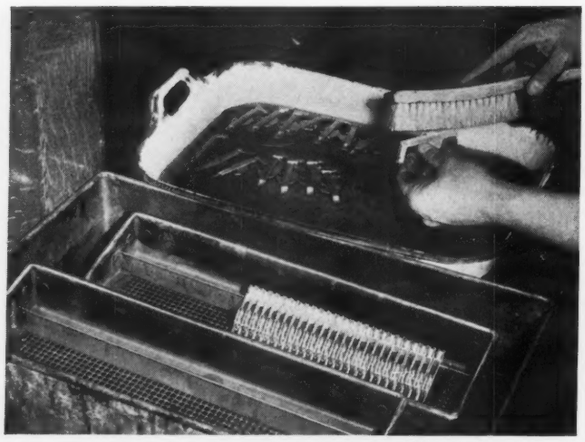


**Fig. 1 — Cleaning separately the cams and yokes for line-composing machines is still preferred by some machinists. Taking each cam out and replacing it is involved. After each cam is scrubbed it is placed in the rack dripping wet. Excess cleaning fluid drains through the wire mesh into the large pan. The cams are air-spun and dried with compressed air.**

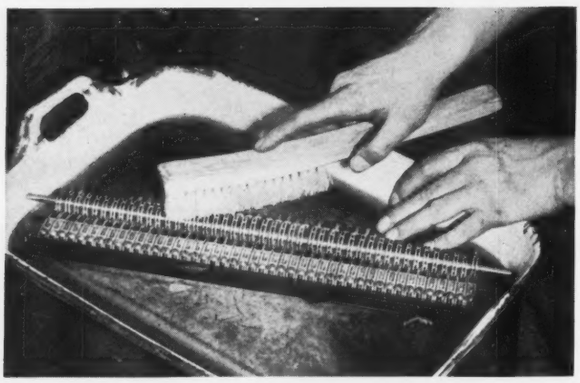


**Fig. 2 — Machinist Herbert Lind at the Cleveland Plain Dealer places the cam-bar assembly in the cleaning fluid and scrubs the cams with a long-handled fibre brush without removing the cams from the bar. A length of ¼ in. drill rod is passed through the large hole in the cam wheel to facilitate cleaning.**

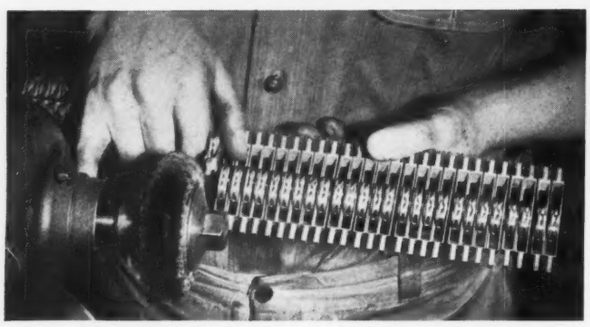
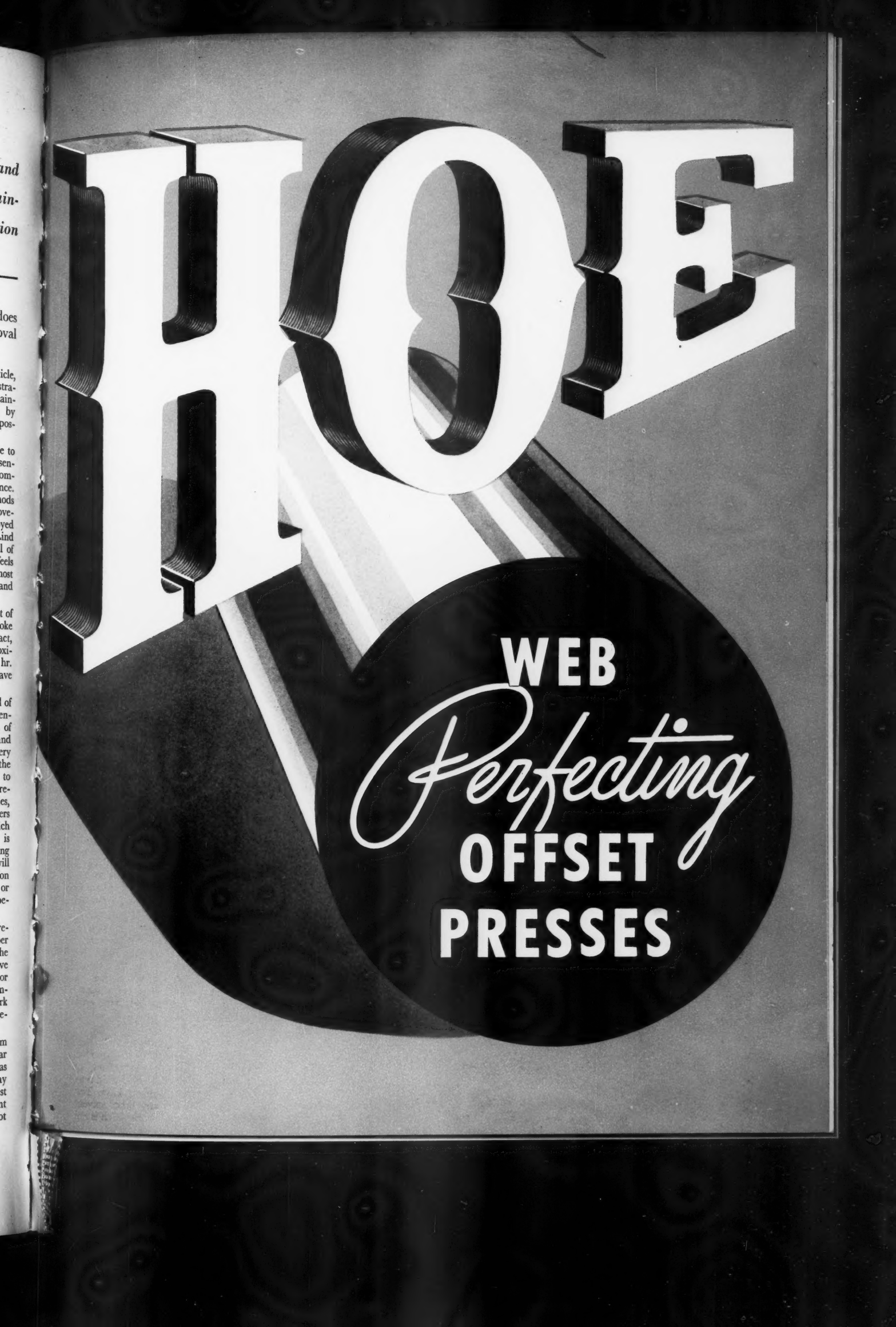


**Fig. 3 — After the cam-bar assembly has been dried with compressed air, the machinist buffs both sides of the free end of each cam yoke. The drill rod passed through the cam wheels (Fig. 2) may be inserted again while buffing the smooth periphery sections of the cam wheels.**


HOE
WEB
Perfecting
OFFSET
PRESSES

## OTHER **HOE** PRODUCTS

Convertible Offset Presses

Metal Decorating Presses

Black Newspaper Presses

Multi-color Newspaper Presses

Rotogravure Presses

Magazine Presses

Precision Plate-making Equipment


# R. HOE & CO., Inc.

**OFFSET PRESS DIVISION**

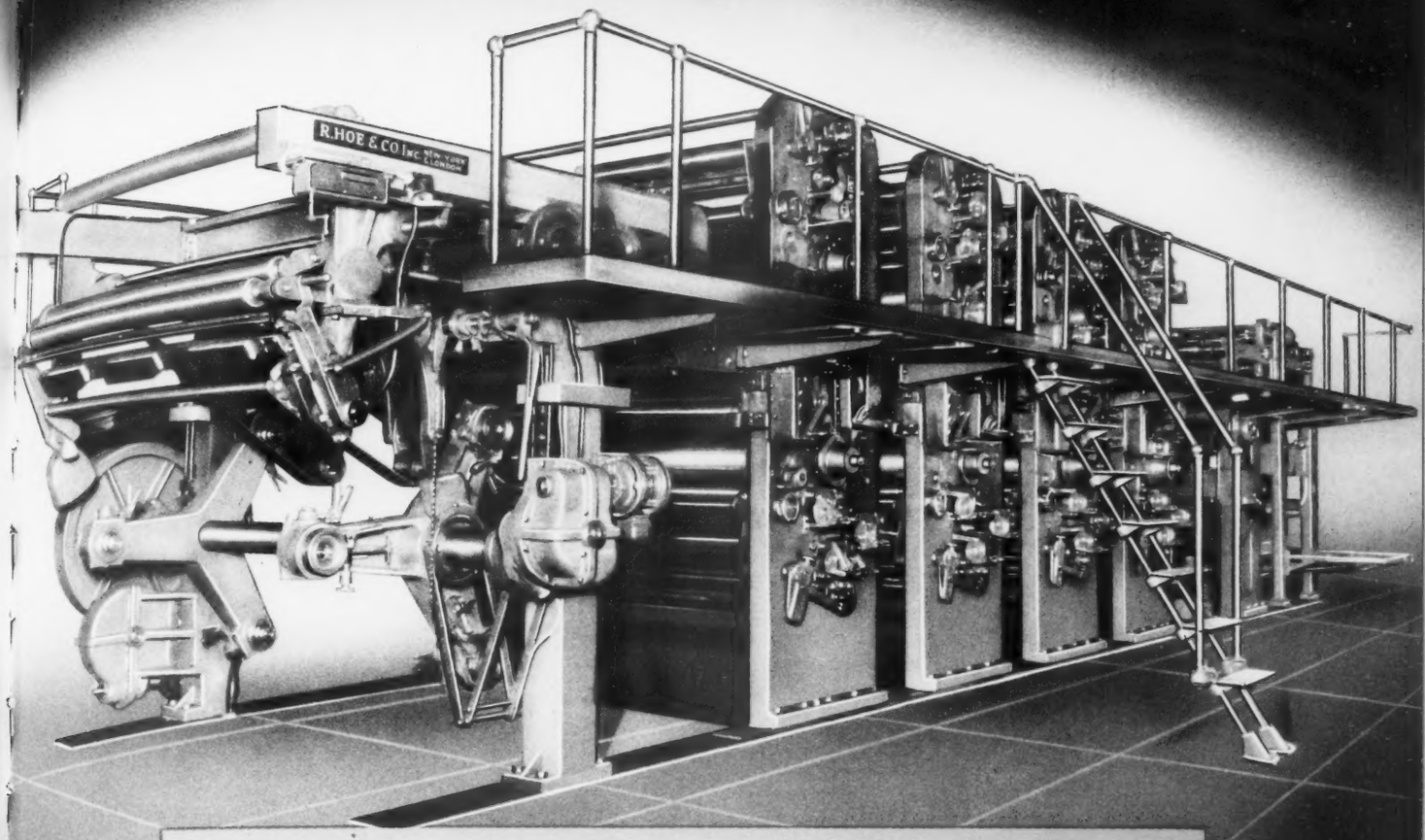
**910 East 138th Street** *(at East River)*

**New York, N. Y.**

BOSTON CHICAGO BIRMINGHAM SAN FRANCISCO



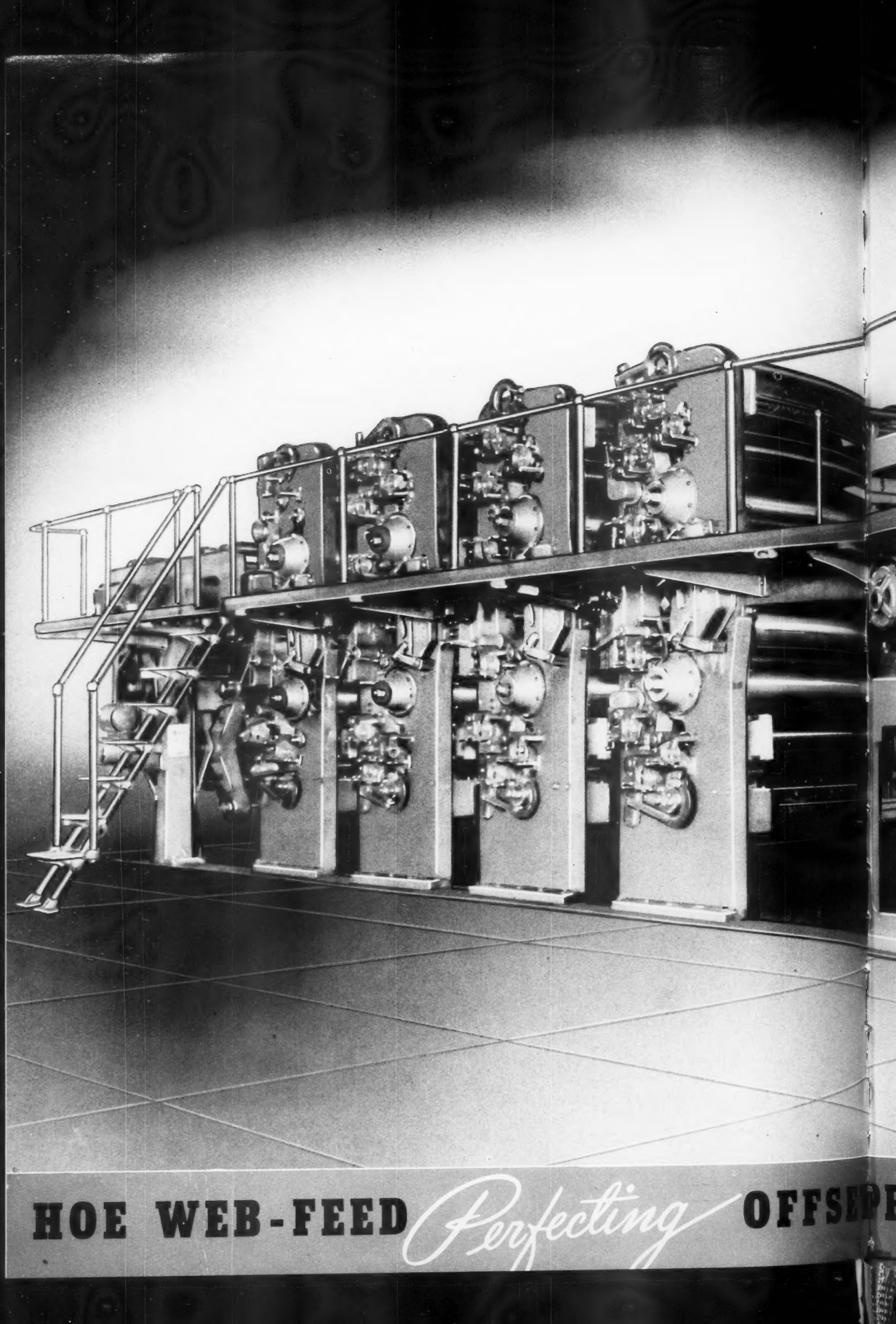
THIS FOLDER WAS LITHOGRAPHED ON THE NEW HOE CONVERTIBLE OFFSET PRESS



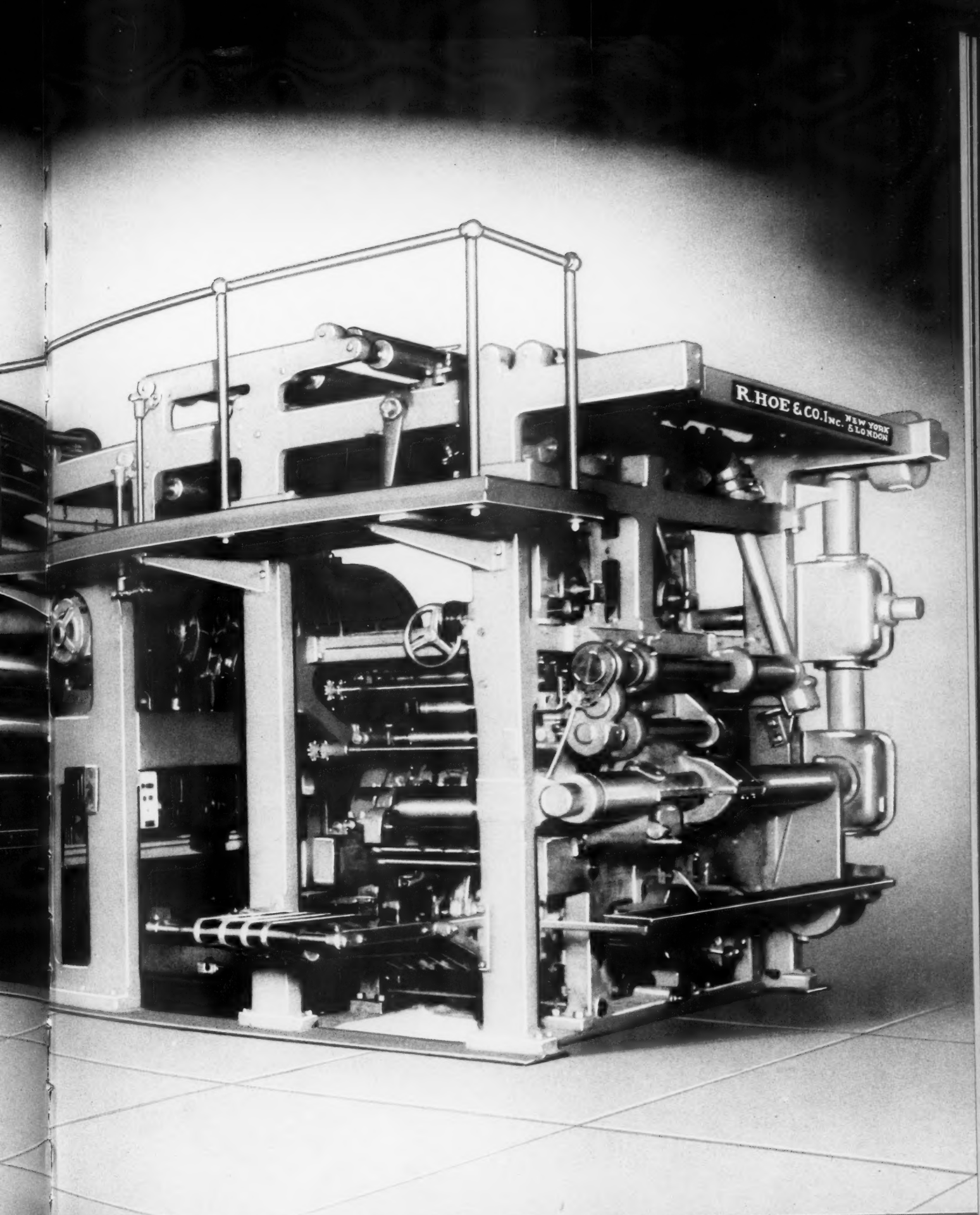

# ANY SIZE *Built to Order* BY HOE

An example of Hoe's facilities, skill and experience in the design and construction of web-feed perfecting offset presses is this 4-unit, 4 color Hoe Press recently installed in the plant of the Trenton Times. It is designed for smooth operation at 15,000 cylinder revolutions per hour, producing a 16-page standard size newspaper with four colors on every page and cut-off at 23 9/16".

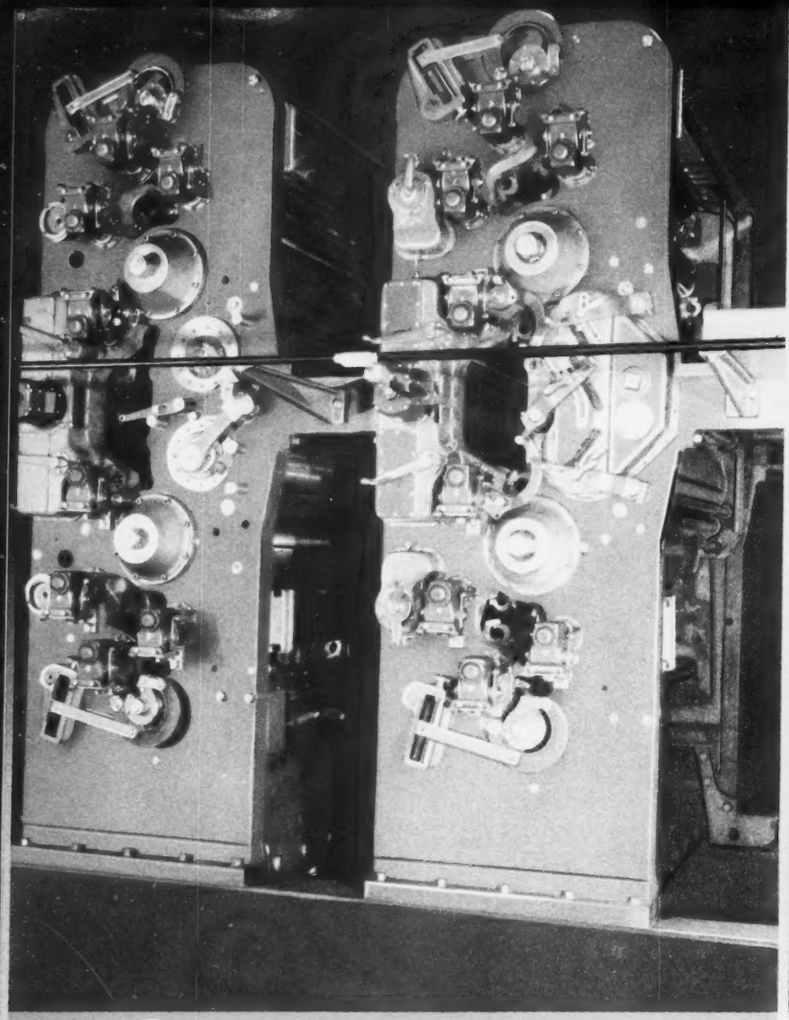
The Offset Press Division of R. Hoe & Co., Inc. is equipped to build all types and sizes of web-feed offset presses, down to the smallest. Each Hoe Web Press is a made-to-order job designed according to the problems involved and the type of product to be produced.



**HOE WEB-FEED** *Perfecting* **OFFSE**

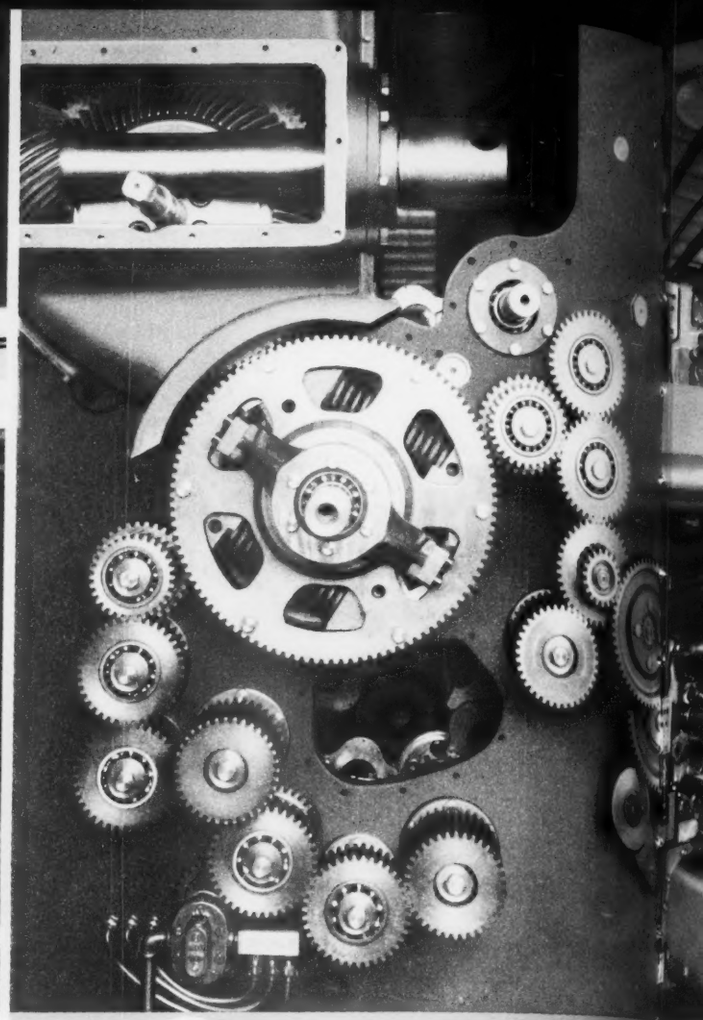



SS PRESS *Plant of the* ***TRENTON TIMES***



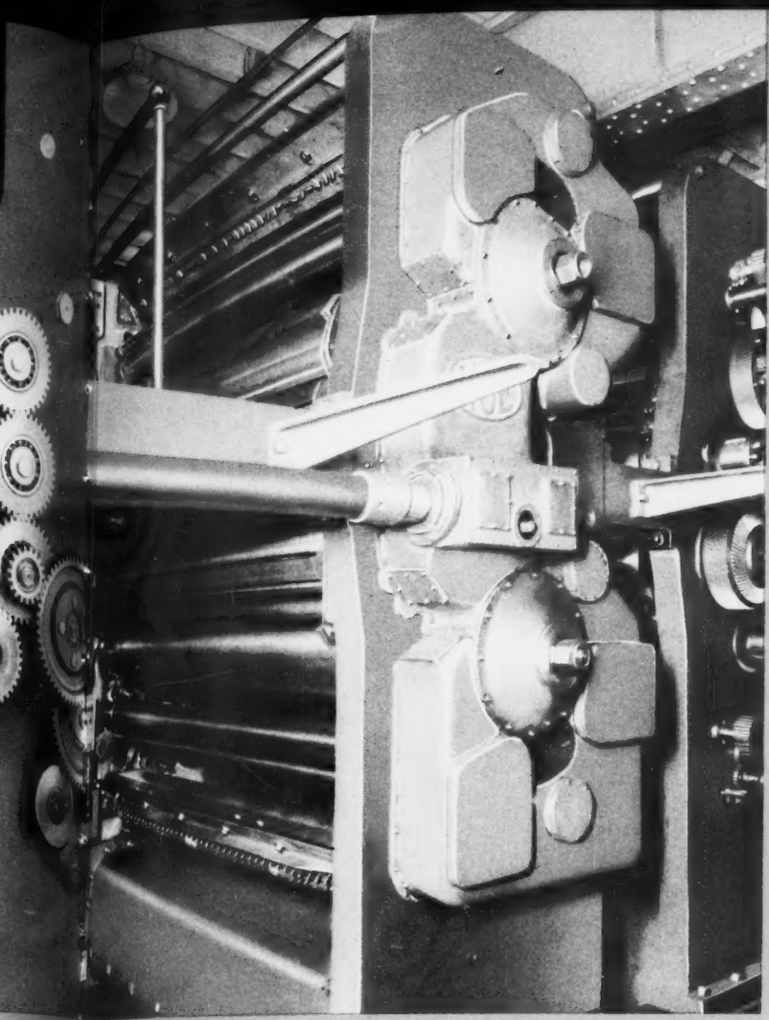
## Convenient OPERATION

Ample area between units provides convenient working space. Upper and lower cylinders are equally accessible. All important controls are conveniently located outside the press. A method of pre-registering plates simplifies and speeds up the job of plating the press. Threading the web is made easier by straight feeding.



## Smooth RUNNING

For smooth, quiet, vibrationless operation at speeds of 15,000 cylinder revolutions per hour, anti-friction bearings are used throughout the press. Vital moving parts within oil tight housings are continuously drenched with lubricating oil. Helical and spur gears are all produced under close metallurgical control in Hoe's own foundry.



## *Rugged* CONSTRUCTION

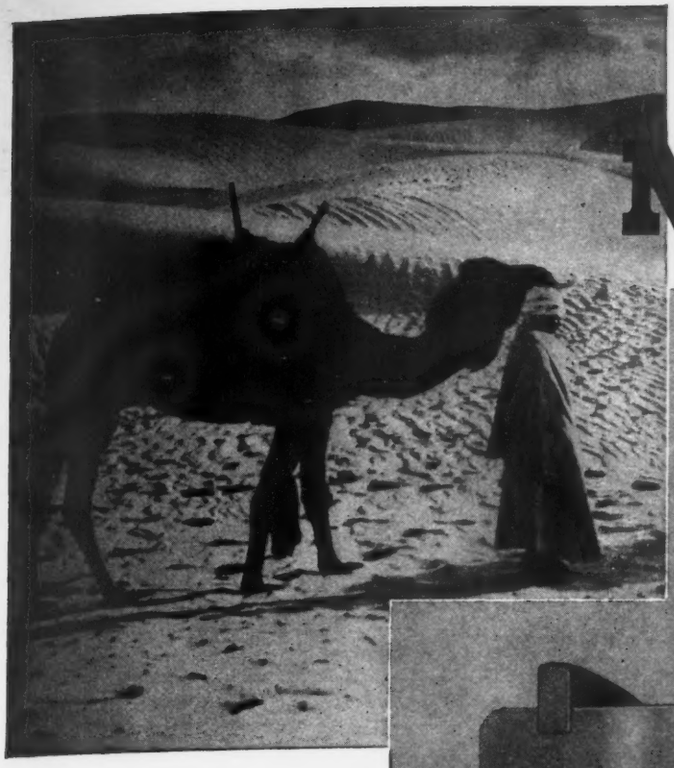
Continuous operation at 15,000 cylinder revolutions per hour requires the generous proportions of basic parts which characterize all Hoe Presses. Each unit with its own solid side frames is securely bolted to and rigidly supported on an unusually heavy bedplate. These vital castings are made for severe service in Hoe's own foundry.

# SPECIFICATIONS
## AND FEATURES
## *of the World's Fastest*
## WEB OFFSET PRESS

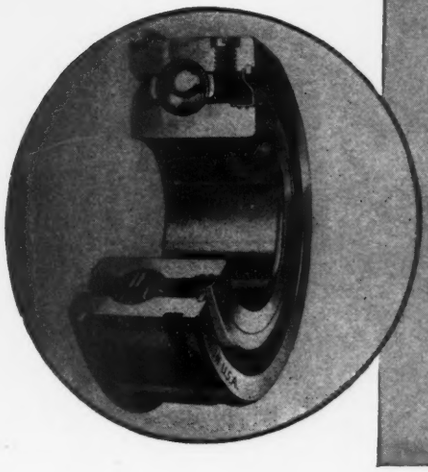
**Designed to produce a 16 page standard size newspaper with 23 9-16″ cut-off in four colors on every page.**

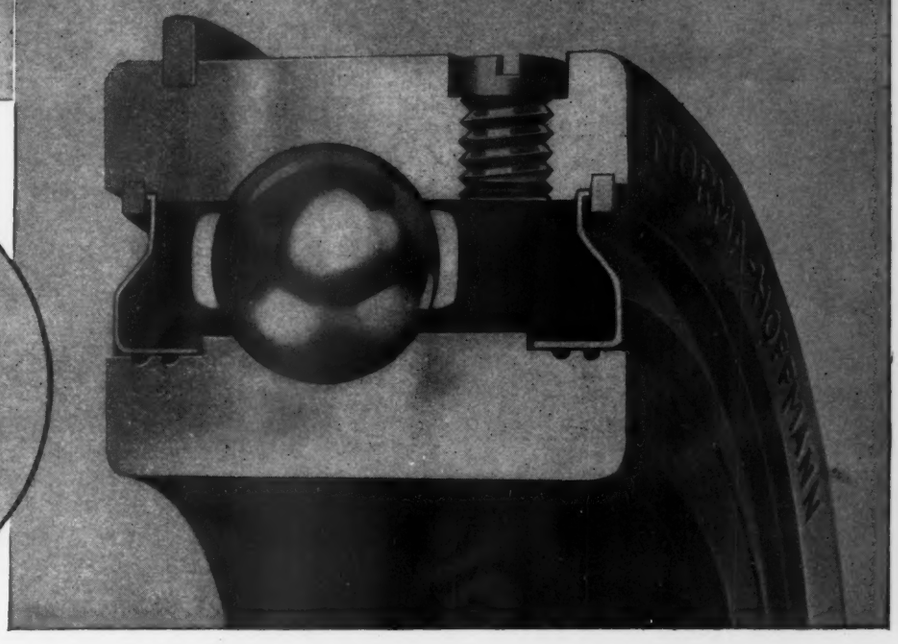
1. **Unit construction**
2. **Straight web feeding**
3. **Any combination of colors up to a maximum of four on each side of the sheet**
4. **Method of pre-registering plates**
5. **Unlimited ink control**
6. **Unlimited moisture control**
7. **All units accessible**
8. **Anti-friction bearings throughout**
9. **Oil-tight housings**
10. **Smooth operation at 15,000 cylinder revolutions per hour**

Lithographed in U.S.A.



# NO *Fear of* GOING DRY!





What water means to the camel, lubricant means to a bearing—LIFE ITSELF. And, like the camel, the "CARTRIDGE" BALL BEARING carries within itself its own EXTRA RESERVE SUPPLY, ample for a long period.

In the cross-section herewith, note how its DOUBLE-ROW WIDTH GIVES THE "CARTRIDGE" BEARING DOUBLE THE GREASE CAPACITY of a single-row type. Note also how the in-built metal seals confine the grease WITHIN THE BEARING ITSELF, providing abundant lubrication to the raceways and rotating elements at all times.

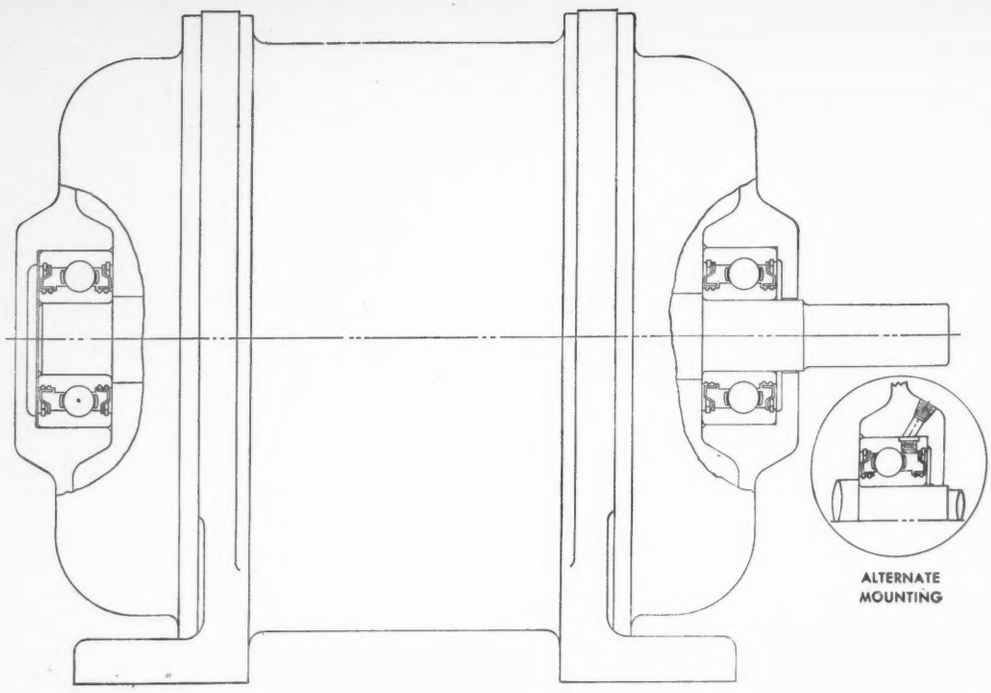
The "CARTRIDGE" BALL BEARING is equipped with close-fitting, wearless metal shields which, with recessed inner ring construction and two or more grease grooves, form a truly effective labyrinth through which THE GREASE CANNOT PASS AND DIRT CANNOT ENTER.

Adopt the "CARTRIDGE" BALL BEARING—as your insurance against neglected lubrication, and dirt and grease contamination. It is handled as an integrally sealed unit, unencumbered by any supplementary closure parts. It provides easier and quicker assembly and disassembly. It stays clean before mounting, during assembly, or when removed, and has convenient regreasing and inspection features. Without additional closures, the "CARTRIDGE" BEARING seal is highly effective regardless of the position of the motor or the unit.

*Write for the Catalog. Let our engineers work with you.*

NORMA-HOFFMANN BEARINGS CORPORATION, STAMFORD, CONN., U. S. A.

# MODERNIZE THE BEARINGS IN




## THE IMPROVED

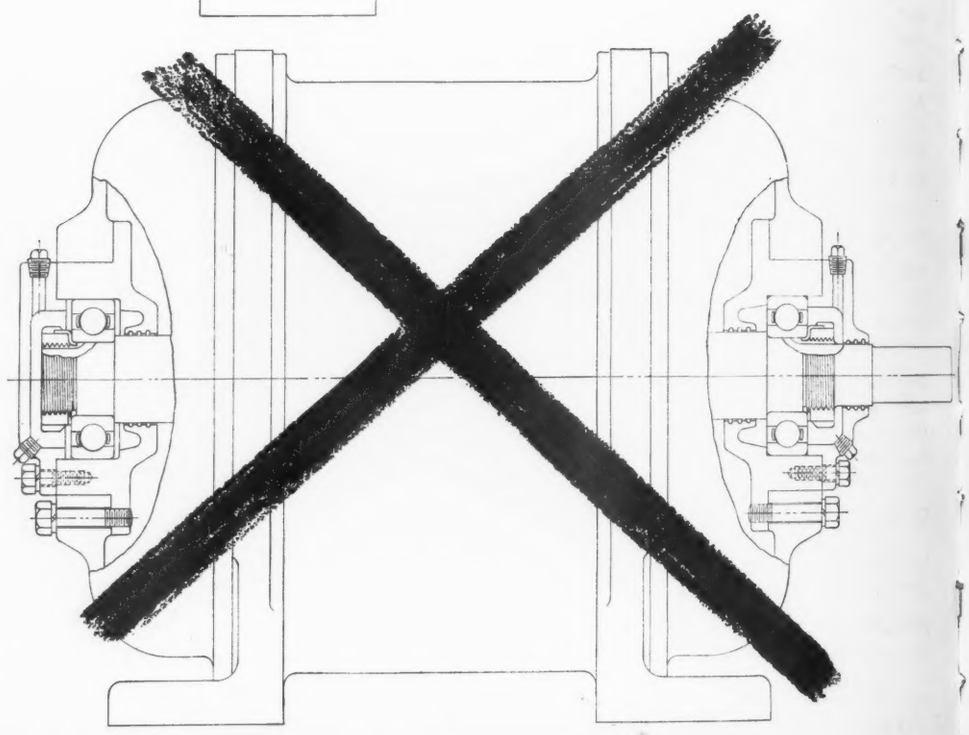
**A Part Section of an Improved Motor Mounting with Ultra-Modern "CARTRIDGE" BALL BEARINGS.**

## THE PRESENT

**A Part Section of a Typical Present-Day Motor with Unshielded Ball Bearings in the Conventional Cartridge Type Mounting.**

•

See opposite page for machining operations and parts eliminated from this motor.



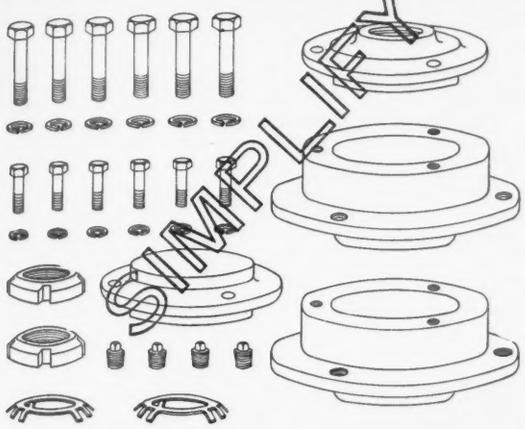
**NORMA-HOFFMANN BEARINGS CORPORATION, STAMFORD, CONN., U. S. A.**

# USE "CARTRIDGE" BALL

# YOUR MOTORS!

## 36 (OR MORE) PARTS ELIMINATED

Below are shown the extra parts required in the conventional cartridge type mounting. THESE ARE ALL ELIMINATED BY USING THE "CARTRIDGE" BALL BEARING,—18 parts per housing and 36 parts per motor.



## 30 (OR MORE) MACHINING OPERATIONS SAVED

Mounting the "CARTRIDGE" BALL BEARING in the motor housing requires only (1) Boring motor end housing for bearing, (2) Facing housing bore for bearing abutment—4 machining operations per motor.

The conventional cartridge mounting employing the unshielded ball bearing requires 30 additional machining operations per motor.

### MACHINING OPERATIONS ELIMINATED

1. Drilling Motor Housing for cap screws.
2. Machining Outer Diameter of Cartridge.
3. Facing Cartridge Flange.
4. Boring Cartridge for Bearing.
5. Facing Cartridge for Cover Plate.
6. Facing Cartridge Bore for Bearing Abutment.
7. Boring Cartridge for Shaft Clearance.
8. Drilling and Tapping Cartridge for Cap Screws.
9. Machining Flange of Cover Plate.
10. Facing Cover Plate.
11. Boring Cover Plate for Shaft Clearance.
12. Drilling Cap Screw Holes.
13. Drilling and Tapping for Grease Fittings and Drain Plugs.
14. Threading Shaft for Lock Nut.
15. Cutting Keyway on Shaft for Lock Washer.

SIMPLIFY

SAVE

Developed expressly to improve electric motor design and performance, the "ultra-modern" "CARTRIDGE" BALL BEARING offers the following advantages:

**SIMPLIFIED DESIGN:** As indicated above, eliminates 36 or more parts,—each an inventory burden and potential trouble-maker. Shortens overall length of mounting and reduces overhang of shaft.

**ECONOMICAL MOUNTING:** Cuts out the many costly machining operations enumerated above. Assures better bearing alignment because of fewer possible variables.

**EASIER AND FASTER ASSEMBLY AND DISASSEMBLY:** The "CARTRIDGE" BALL BEARING is handled as an integrally sealed, single unit unencumbered by numerous complementary parts.

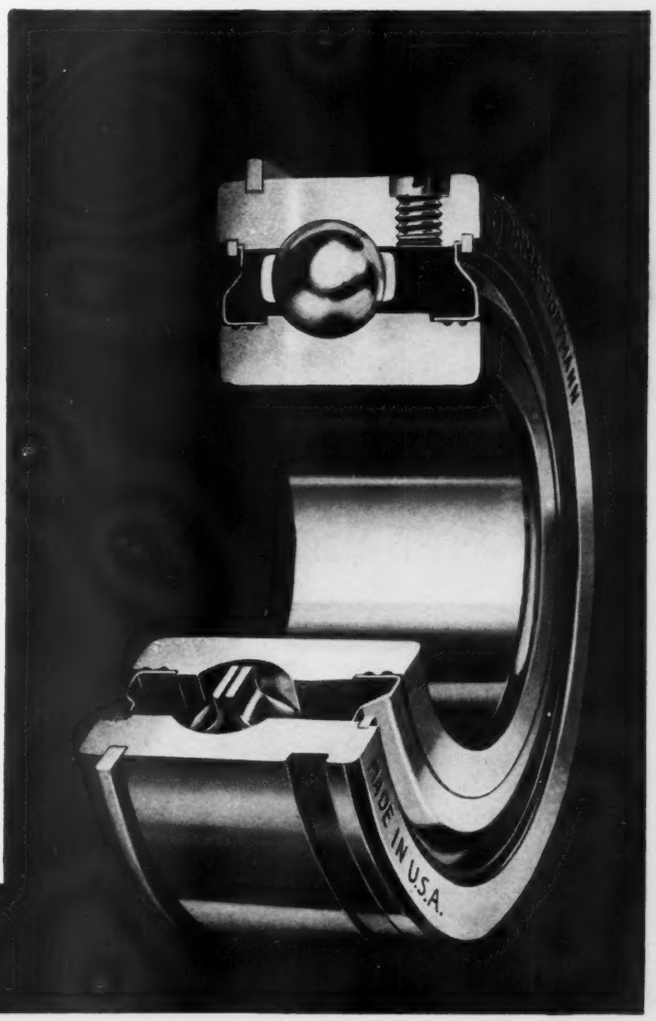
**DIRT HAZARD ELIMINATED:** Tightly-fitted seals prevent ingress of foreign matter during assembly, in service and when removing armature. The "CARTRIDGE" BALL BEARING comes pre-packed with clean, "stability-tested," uncontaminated grease.

**SLIPPAGE, PEENING AND COCKING PREVENTED** due to wider race contact area on shaft and in housing. No locking means required and elimination of threading permits use of stronger shafts.

**LONGER LIFE AND LOWER MAINTENANCE,** resulting from large, lasting grease supply kept in close proximity to rotating surfaces by highly efficient, wearless metal seals. No "dead" grease space and no leakage irrespective of position of motor.

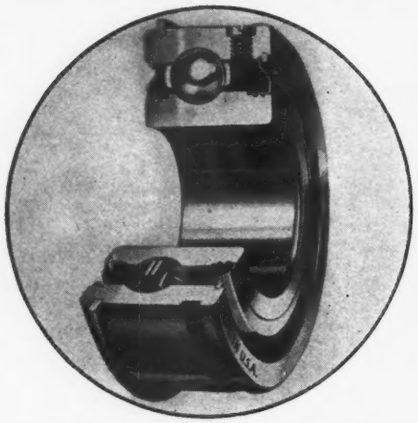
**REGREASING AND INSPECTION FACILITATED,** refilling plug and removable seals being provided for such purposes.

*Let our engineers work with yours. Write for the Catalog.*

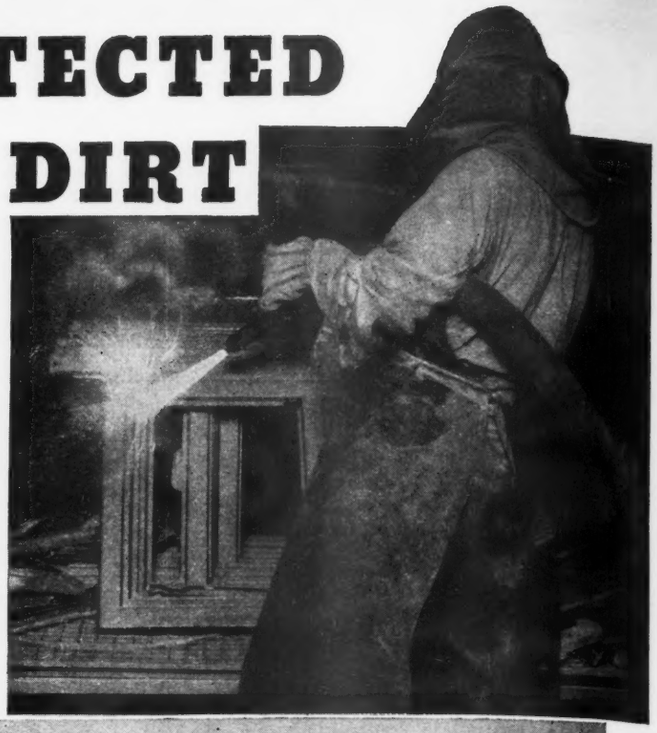


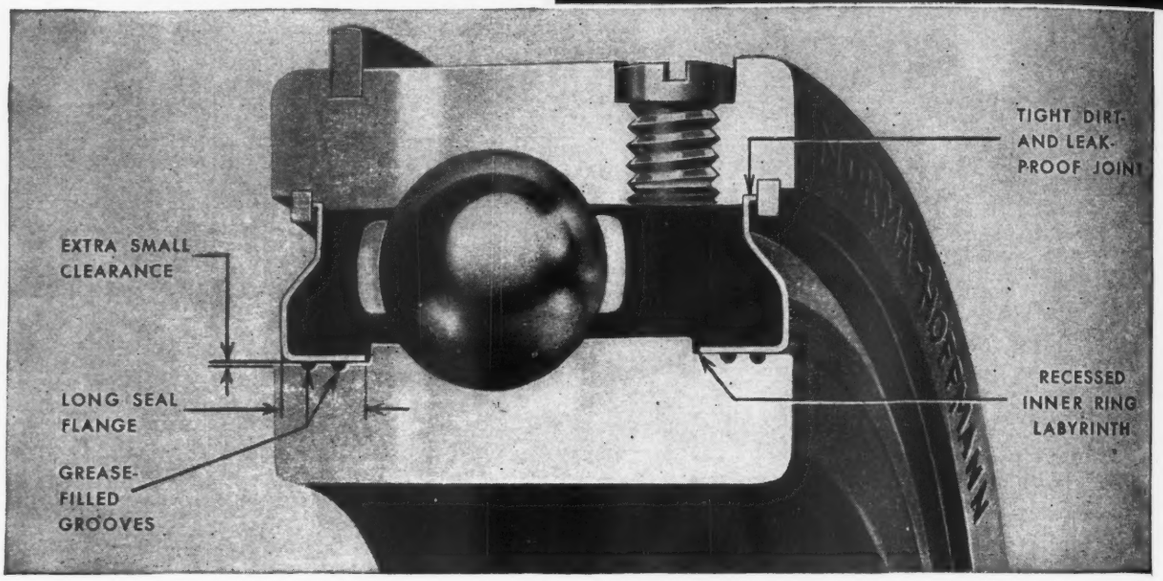

# BEARINGS

# FULLY PROTECTED AGAINST DIRT



Made to Standard Double-Row Widths
**WITH 100% GREATER GREASE CAPACITY**






A clean, well-lubricated bearing is practically wearless. Dirt, however, will relentlessly destroy it. KEEP DIRT OUT AND KEEP THE GREASE IN, and you are protected against noise, rejections, and premature wear.

In the illustration herewith, note the five distinctive features that exclude dirt from the "CARTRIDGE" BALL BEARING. That minute clearance between the long seal flange and recessed inner ring is ALWAYS filled with grease. The grease grooves in the inner ring are so many added "dams" against the entrance of dirt.

Thus, without any additional closures, the integral "CARTRIDGE" seals KEEP THE DIRT OUT AND THE GREASE IN—regardless of the position of motor or unit. In assembling or disassembling in the shop, the "CARTRIDGE" BALL BEARING STAYS CLEAN because its internal parts are never exposed.

Adopt the "CARTRIDGE" BALL BEARING as insurance against dirt and grease contamination, and against neglected lubrication. It eliminates numerous supplementary closure parts and machining operations and variables, and speeds up production; and it has convenient regreasing and inspection features.

*Write for the Catalog. Let our engineers work with yours.*

**NORMA-HOFFMANN BEARINGS CORPORATION, STAMFORD, CONN., U. S. A.**

# 1840 — 1940

CELEBRATING A CENTENNIAL OF PROGRESS

A company is large or small only by comparison. Just to be the largest, whether manufacturers of newspaper printing inks or in any given field of endeavor, is not enough. Continued development is vitally important.

Growth demands vision, control, coordination, ability and discipline, with a constant desire to improve both personnel and product.

For 100 years Morrill has been a growing organization. From a small kettle heated by a kitchen stove back in 1840, Morrill today has factories, branches and

service stations located in principal cities throughout the United States.

Such growth is not a matter of chance or accident. It is due to a courageous desire to make only the best, as prompted by science and research, and to serve efficiently those who appreciate and demand the finest in finished results.

To the publishers and mechanical executives of America we extend our sincere gratitude for their generous counsel, for their fine cooperation and for the faith and confidence which they have shown through the years in our product and our company.

# Geo. H. Morrill Co.

DIVISION · GENERAL PRINTING INK CORPORATION

100 SIXTH AVENUE :: NEW YORK, N. Y.

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NEW YORK: 100 Sixth Avenue

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PHILADELPHIA: 137 North Twelfth Street
SAN FRANCISCO: 1425 Folsom Street
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FORT WORTH: 1300 Throckmorton Street
SEATTLE: 3131 Western Avenue

FACTORIES: NORWOOD, MASS. :: TACONY, PA. :: CLEARING, ILL. :: SO. SAN FRANCISCO, CALIF.

Printed in U.S.A.

# Eastern Newspaper Supply

9603 NORTHERN BLVD.
CORONA, LONG ISLAND
NEW YORK

THE GRAPHIC ARTS SUPPLY HOUSE

# THE PONY AUTOPLATE

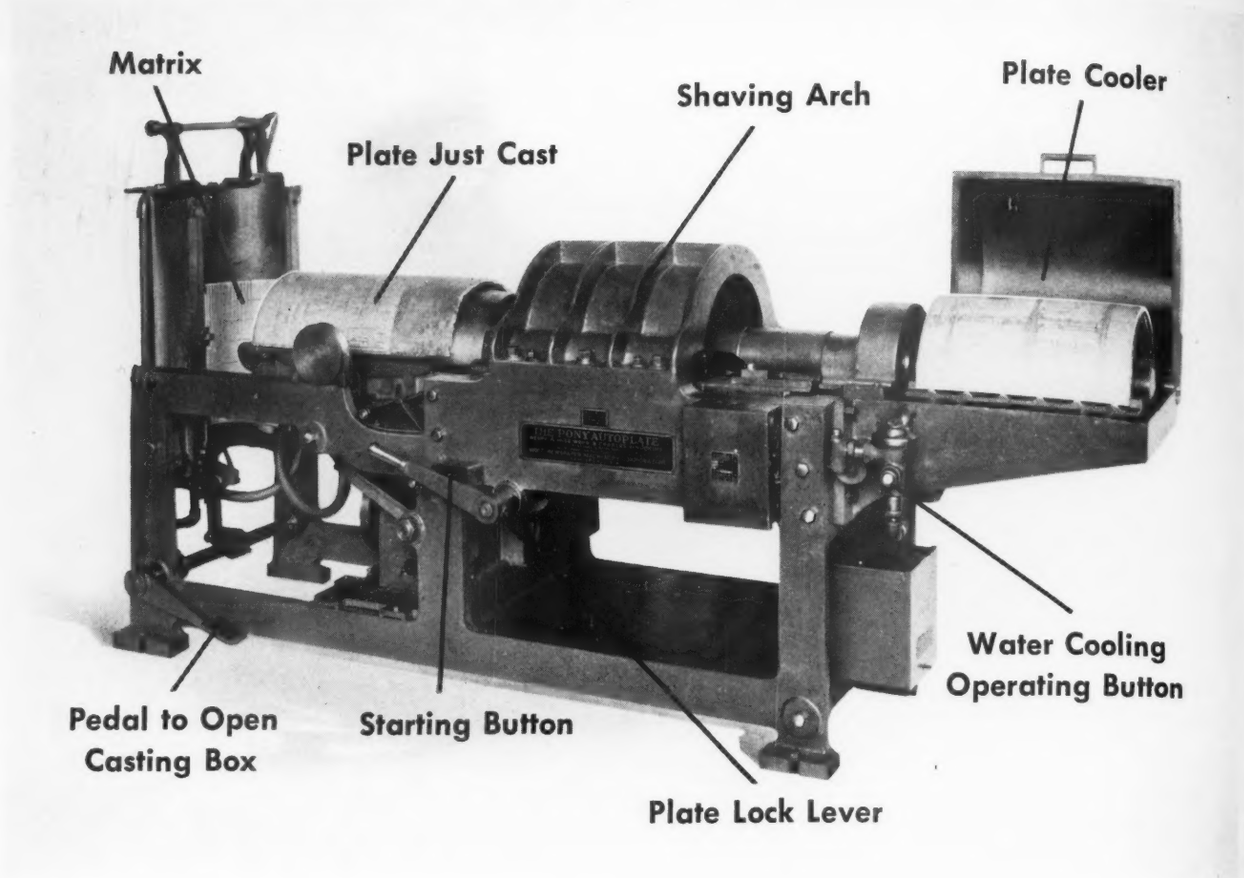
*available with or without*

## Vacuum Equipment

***FOR FASTER, BETTER, MORE ECONOMICAL STEREOTYPING***

**WOOD NEWSPAPER MACHINERY CORPORATION**

PLAINFIELD, NEW JERSEY NEW YORK OFFICE: 501 FIFTH AVENUE




## WHAT THE PONY AUTOPLATE DOES

It makes plates more swiftly, more accurately, more economically than can be done by any but the Autoplate method.

It casts, shapes, shaves, trims and cools the plate, delivering it ready for press, thus eliminating all hand-planing, hand-tooling, hand-dipping, and the like.

It produces plates of uniform thickness and accurate curvature, thus lessening web-breaks and newsprint waste. It saves damage to press blankets and rollers, and prevents many losses and delays which are due to defective or inaccurate printing plates.

It saves time in the pressroom by insuring a quicker dressing of presses and by promoting their continuous operation.

It makes for a better looking newspaper and puts it earlier on the street.

The Pony Autoplate is standard equipment in newspaper plants.



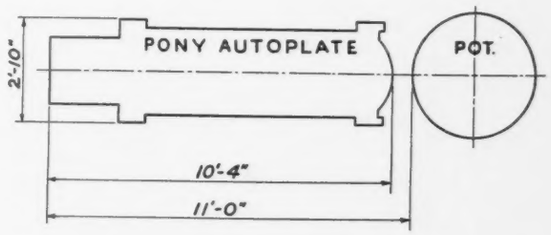
VACUUM

# *Savings effected by the PONY*

# AUTOPLATE

## as compared with Hand-box Equipment

**Uniform plates.** Plates lifted by hand from a casting box to a finishing machine are still hot and are likely to become distorted. In the Pony Autoplate, plates are not subjected to handling strains and therefore come off uniform and true. The cost of recasting warped plates is eliminated.




In the Pony Autoplate, the hot plate is not lifted but is merely slid along ways into the shaving arch. After the tail is cut off and the plate is shaved, the plate is again slid along ways to the cooler, where a pre-determined amount of water is sprayed under the plate, so that when the cooler cover is lifted the plate is set and ready for delivery to the press.

**Lighter plates.** Plates made by the Pony Autoplate are approximately five pounds lighter than plates made with handbox equipment. This means a saving of approximately 10 per cent in the amount of metal which is melted, cast, and handled.

**Minimum floor space.** The Pony Autoplate occupies only 10 feet 4 inches by 2 feet 10 inches of floor space—approximately 29 square feet—which is less than half the space required for hand-box equipment.

**Extra agate lines.** In many cases the Pony Autoplate can be designed to provide an increased page length of from two to five agate lines—from sixteen to forty additional lines per page.

**Power economy.** The Pony Autoplate motor operates only when the plate is being finished. It does not run continuously — in fact, it cannot be started unless the plate is locked in the shaving arch.

**No compressed air.** The Pony Autoplate requires no compressed air, hence no electric power is used for driving a compressor unit and there is no maintenance of compressor equipment.

**Here is the operating cycle of the Pony Autoplate: It casts the plate and tail; it removes the tail; it shapes the cast to printing curvature while it is hot; it shaves the plate to an accurate and uniform thickness; it bathes the finished plate and delivers it cold, ready for the press. One plate is being cast while the preceding plate is being finished and cooled ready for the press.**



The Greatest Advance in Stereotyping in More Than Fifty Years . . . See pages 6 and 7

# Typical Comments from Pony Autoplate Users

**Birmingham Post**

"Our Pony Autoplate Machine is giving entirely satisfactory service."

**Bridgeport Post-Telegram**

"Our Pony Autoplate Machines are giving satisfaction in every respect. They have been in operation day and night for over five years and have never failed."

**Calgary Herald**

"We are pleased to state that our Pony Autoplate Machines are working satisfactorily."

**Charleston, W. Va., Daily Mail**

"Our Pony Autoplate Machine has always been a valuable part of our plant, giving uninterrupted service for some seven years."

**Chester Times**

"The Wood Pony Autoplate is giving satisfactory service and has done so since installation in May, 1931. There has not been any time during this period that the Autoplate has not performed very satisfactorily."

**San Diego Union-Tribune**

"Our Pony Autoplate Machine has given us satisfactory service ever since it was installed."

**Honolulu Star-Bulletin**

"As we have used our Pony Autoplate Machine more than nine years without extensive repairs, we consider it has given us excellent service."

**Indianapolis Times**

"The two Pony Autoplate Machines in use in our plant are continuing, as in the past, to render a highly satisfactory service to us."

**Long Beach Press-Telegram**

"Our Pony Autoplate Machine is giving us splendid satisfaction."

**Lorain Journal**

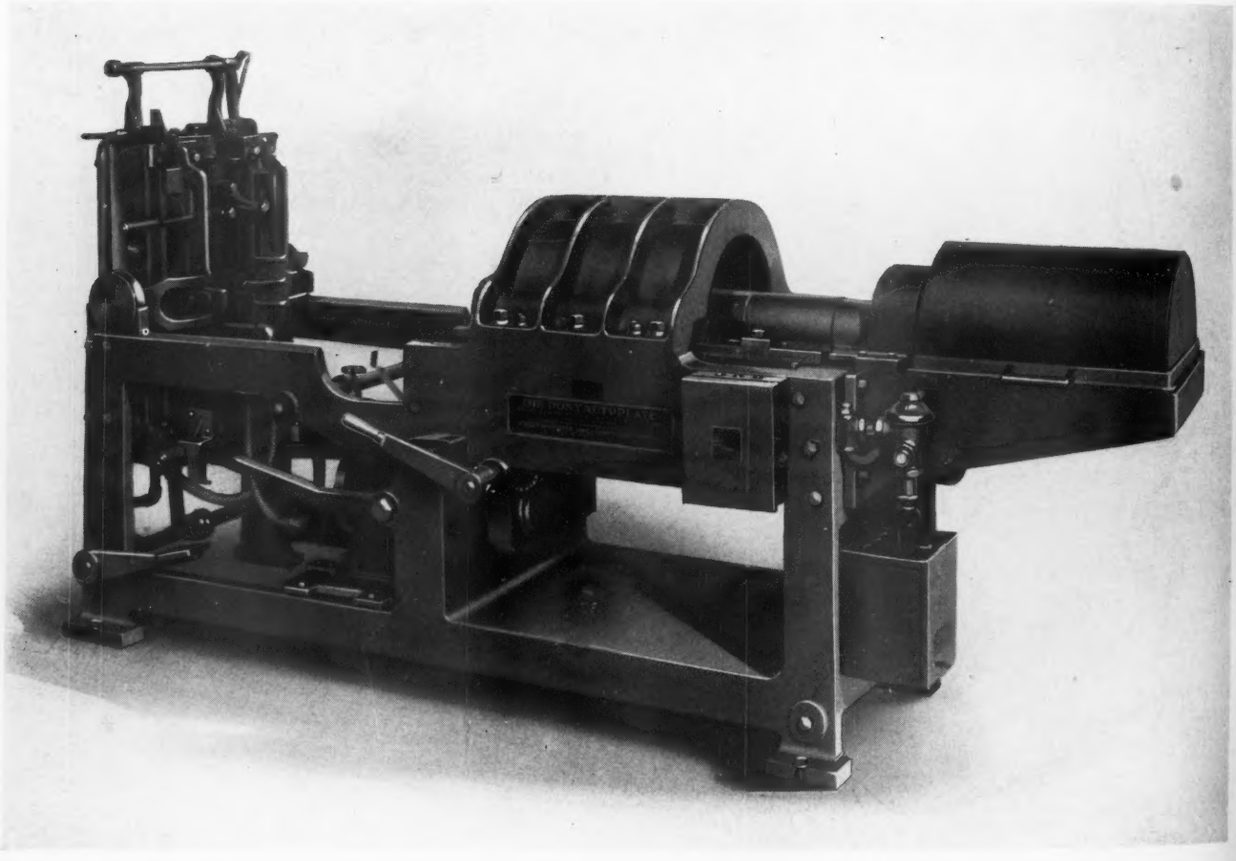
"Our Pony Autoplate Machine is giving satisfactory service."

**Wall Street Journal**

"Our Pony Autoplate Machines have been giving us very satisfactory service."

(*Continued on page* 8)

# *This is the Standard Pony Autoplate*





***The Pony Autoplate eliminates the lifting of 13?OU***

# *If your work is*

# HEAVY...

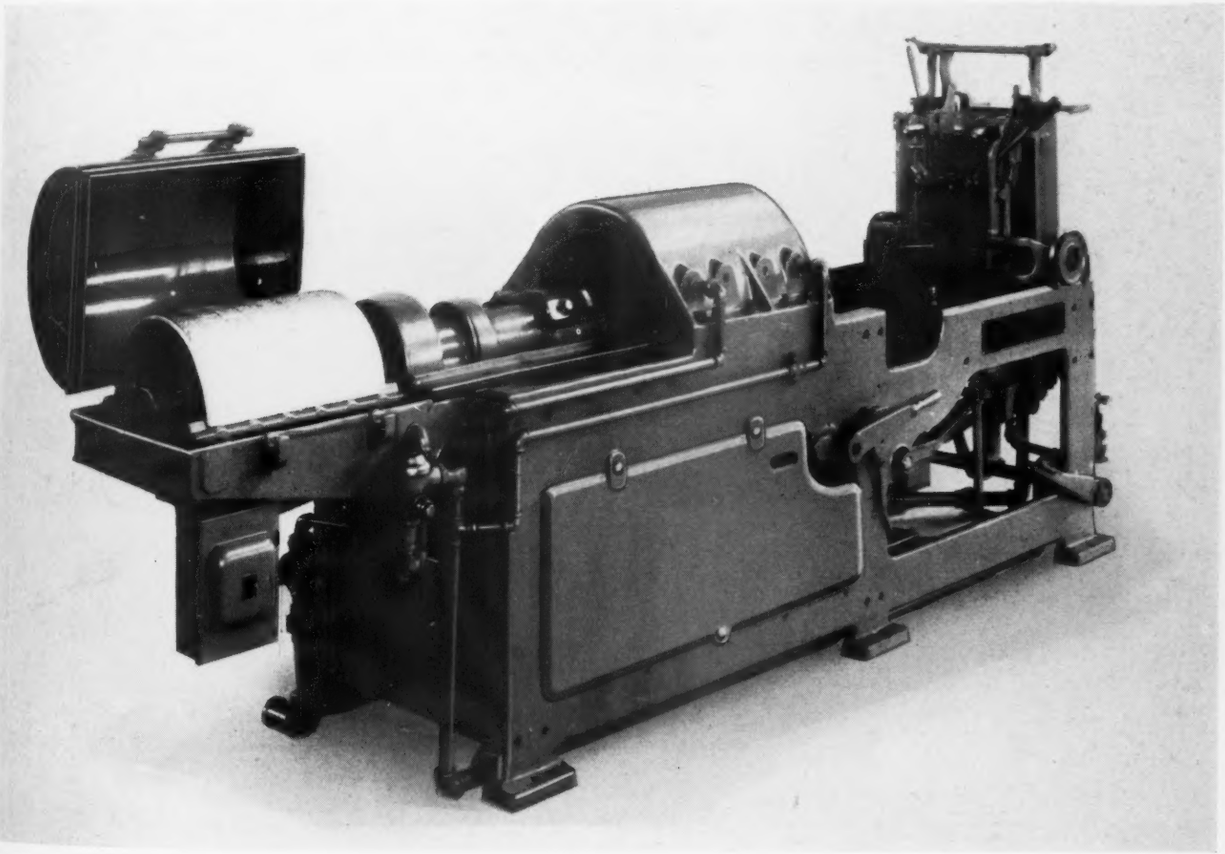
We recommend the Heavy-Duty Pony Autoplate for newspaper plants where a large number of plates are cast or where the rapid closing of forms allows very little time between casts.

To meet such conditions we equip the Heavy-Duty Autoplate with a water-cooled shaving arch, which will not overheat.

The Heavy-Duty Pony Autoplate is designed and built to "take it". The frames are heavier, and there are two extra supporting feet under the center of the machine.

The following equipment is included with the Heavy-Duty Pony Autoplate: Vacuum back in the casting box; vacuum pump, pump motor, and electrical control; water-cooled shaving arch; segment ring and tail sheets for double-page plates, and extra tail sheets; and, of course, full electrical equipment necessary for operation.

## *This is the Heavy-Duty Pony Autoplate*



*13 POUNDS of metal in the making of every plate*

# VACUUM

**The only known way to hold a matrix snugly against the back of a casting box, thereby eliminating buckles and light spots**

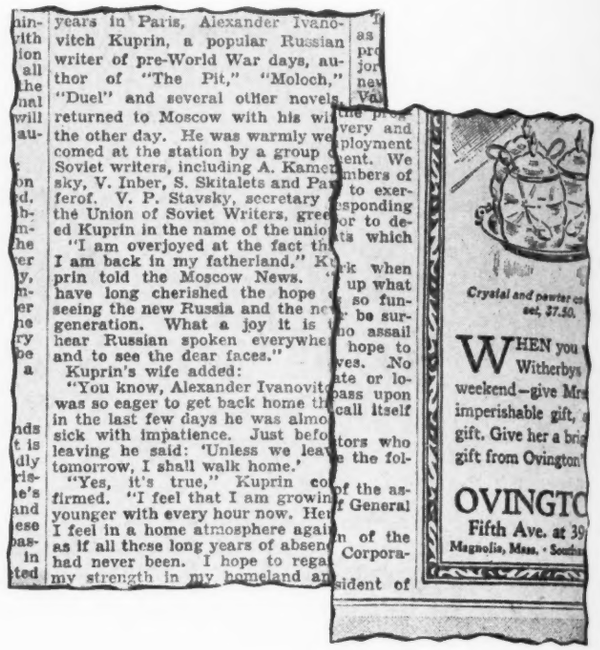
years in Paris, Alexander Ivanovitch Kuprin, a popular Russian writer of pre-World War days, author of "The ," "Moloch," "Duel" and s other novels returned to M with his wi the other day. s warmly we comed at the st by a group ent. We Soviet writers, i ing A. Kame sky, V. Inber, S. talets and Pa ferof. V. P. St y, secretary the Union of Sov t Writers, gre ed Kuprin in the ne of the unio "I am overjoyed at the fact th I am back in my fatherland," K prin told the Moscow News. have long cheri ed the hope seeing the new R sia and the ne generation. W a joy it is hear Russian s everywhe and to see the aces." Kuprin's wife : "You know, A er Ivanovit was so eager to back home th in the last few d s he was almo sick with impatien e. Just bef tors who leaving he said: 'Unless we lea the fol tomorrow, I shall walk home.' "Yes, it's true," Kuprin co the af firmed. "I feel that I am growi younger with every hour now. He I feel in a home atmosphere again as if all these long years of absen had never been. I hope to rega my strength in my homeland an sident of

Crystal and pewter co set, $7.50.

WHEN you Witherbys weekend—give Mr imperishable gift, gift. Give her a bri gift from Ovington'

OVINGTO Fifth Ave. at 39 Magnolia, Mass. • Southa

## *WITHOUT* VACUUM


years in Paris, Alexander Ivanovitch Kuprin, a popular Russian writer of pre-World War days, author of "The Pit," "Moloch," "Duel" and several other novels returned to Moscow with his wi the other day. He was warmly we comed at the station by a group Soviet writers, including A. Kame sky, V. Inber, S. Skitalets and Pa ferof. V. P. Stavsky, secretary the Union of Soviet Writers, gre ed Kuprin in the name of the unio "I am overjoyed at the fact th I am back in my fatherland," K prin told the Moscow News. have long cherished the hope seeing the new Russia and the ne generation. What a joy it is hear Russian spoken everywhe and to see the dear faces." Kuprin's wife added: "You know, Alexander Ivanovit was so eager to get back home th in the last few days he was almo sick with impatience. Just bef leaving he said: 'Unless we lea tomorrow, I shall walk home.' "Yes, it's true," Kuprin co firmed. "I feel that I am growin younger with every hour now. He I feel in a home atmosphere agai as if all these long years of absen had never been. I hope to rega my strength in my homeland an sident of

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## *WITH* VACUUM

The accompanying unretouched pictures show, at the left, parts of two newspaper pages in which there are light spots due to buckles in the mats, and, at the right, the same pages printed from new plates, cast from the same mats, with the Wood Vacuum Back in operation, showing the elimination of the light spots. In subsequent casts made from the same mats, without the Vacuum Back, the buckles again showed up in the printed pages.

Newspapers using Vacuum - equipped Autoplates report blacker solids, sharper printing of halftones and type, and elimination of mat creeping in the casting box.



•

## What Users Say About WOOD Vacuum Equipment

•

### New Orleans Times-Picayune and States

"The vacuum backs pull the halftones up to a perfect position for printing. The appearance of our paper has improved about twenty-five per cent."

### Dallas Morning News

"We feel that there is a definite improvement in the surface of plates cast with the vacuum back over the former process. The face is very smooth and the type sharp cut."

### Birmingham News

"The even, smooth surface that we obtain on the face of our plates not only produces sharper and better printing, but we believe there is less wear

# *How* VACUUM EQUIPMENT *insures Better Printing Plates*

**OPERATION** of an Autoplate equipped with the vacuum casting box is not materially different from the operation of the same machine without this equipment. The vacuum is supplied from a separately driven pump, which can be arranged to operate only when the Autoplate machine is running. In the Pony Autoplate, the vacuum is turned on and released by means of a treadle.

**TRUE CURVATURE** of the stereotype plate is insured, with vacuum equipment, by the fact that the matrix is drawn to the true curvature of the casting box by the vacuum.

**BUCKLES ARE ELIMINATED** by the vacuum equipment and thus the cause of much recasting is banished from the stereotyping department. It has been demonstrated that the vacuum used will pull practically any buckle out of the mat, regardless of its size or shape. In many cases, shallow column rules and borders are pulled up so that they print distinctly, where otherwise they would be weak or light.

The pictures on the opposite page show the results of a test made to demonstrate the elimination of buckles.

Buckles which cannot be *pushed* out by the pressure of the stereotype metal are *pulled* out by the vacuum between the mat and the back of the casting box.

**PULLDOWNS** are much less likely to occur in a vacuum casting box. The reason is that there is a row of holes in the casting box quite close to both the head and foot of the type page. With air being drawn through these holes, the mat is held firmly against the casting box at both head and foot and there is less tendency for "pulldowns" to show. In some cases this permits the printing of a longer page.

**MAT CREEPING IS ELIMINATED** by vacuum equipment. This is extremely important in maintaining register, particularly when casting plates for color work.

**A BETTER PRINTING FACE** is obtained through the use of vacuum equipment, due to the fact that the vacuum pulls entrapped air from back of the mat and through the mat. For the same reason, there is less porosity in the open spaces of the plate, as close inspection will show; and solids appear blacker on the printed page.

**VACUUM-CAST PLATES are so true on their surface that less impression is required on the blankets and rollers, thereby prolonging the life of the blankets and making it possible to operate rollers longer between grindings.**



on press blankets and rollers, as it allows us to carry less impression and set rollers lighter, owing to the even surface of the plate."

**Pittsburgh Post Gazette**

"We are very much pleased with this installation, the new vacuum backs being all that you have claimed for them."

**Brockton Daily Enterprise**

"After 18 months of daily operation with the vacuum-casting Pony Autoplate, I again say that vacuum casting makes perfect plates. As I am using 3/4-inch shrinkage, it would be almost impossible to get the editions out on time and still have good plates without the Vacuum."

**Springfield, Massachusetts, Shopping News**

"We feel that our ability to use these (hard) blankets and get superior results is entirely due to the fact that our Pony Autoplate is equipped with the vacuum back, which gives us a much better and more uniform stereotype plate."

# Typical Comments from Pony Autoplate Users

(*Continued from page* 4)

**Newark, N. J., Ledger**

"Our Pony Autoplate Machine is working splendidly, and everything is satisfactory."

**Rocky Mountain News**

"Our Pony Autoplate Machine is giving us good service and is ample for our requirements."

**San Diego Sun**

"The Pony Autoplate Machine used by the Sun is and has been giving complete satisfaction."

**Holyoke Transcript**

"We are very pleased with our Pony Autoplate Machine."

**Richmond Times-Dispatch**

"Our Pony Autoplate Machines are standing up remarkably well under a strain for which they were not originally designed."

**Tampa Daily Times**

"We find our Pony Autoplate Machine to be very satisfactory and it has ample capacity for our present requirements."

**Toronto Mail and Empire**

"Our Pony Autoplate Machines have been in constant operation for something over seven years with, practically speaking, no repair bill. They are giving very satisfactory service."

**Wilkes-Barre Record**

"Our Pony Autoplate Machine is giving perfect satisfaction."

**Kenosha Evening News**

"We have found our Pony Autoplate Machine very satisfactory since its installation in our plant a number of years ago. It has given us very satisfactory service."

**Lansing State Journal**

"Our Pony Autoplate Machines have performed their duties during the past three or four years in excellent fashion."

**Passaic Herald-News**

"Our Pony Autoplate Machine is giving satisfactory service and the machine is working perfectly."

**Joliet Herald News**

"In the fourteen years this (Pony Autoplate) machine has been in service, it has cast in excess of 300,000 printing plates. It is still giving excellent service."

**St. Joseph, Mo., News-Press**

"Our Pony Autoplates, installed in 1924, have given us excellent service and are functioning as well as when they were first installed."

**Lancaster, Pa., New Era Journal-News**

"Your Pony Autoplate has been in daily service since 1923 and is still producing high quality plates. This equipment has minimized the hard work formerly required, and has solved the production problem in our stereotype department."

**New Brunswick, N. J., Home News**

"Our Pony Autoplate Machine was installed in 1924. It has been durable and dependable, and in view of the service that it has given I consider it worthy of recommendation to anyone."

**Springfield, Mass., Shopping News**

"We are doing a far superior printing job since we installed the Pony Autoplate; and, furthermore, we are turning out perfect plates much faster than ever before."

**Danville, Va., Register**

"Our Pony Autoplate has served us well. We were awarded first prize for best press work among Virginia newspapers—20,000 to 60,000 population class—in 1937.

"This equipment was installed in 1923."

**Bay City, Mich., Times**

"The Pony Autoplate is rendering very satisfactory service. It has been of great assistance in the improvement of the appearance of our newspaper."

**Allentown, Pa., Morning Call**

"We wish to assure you of our complete satisfaction with the equipment your corporation provided for us."

WOOD NEWSPAPER MACHINERY CORPORATION

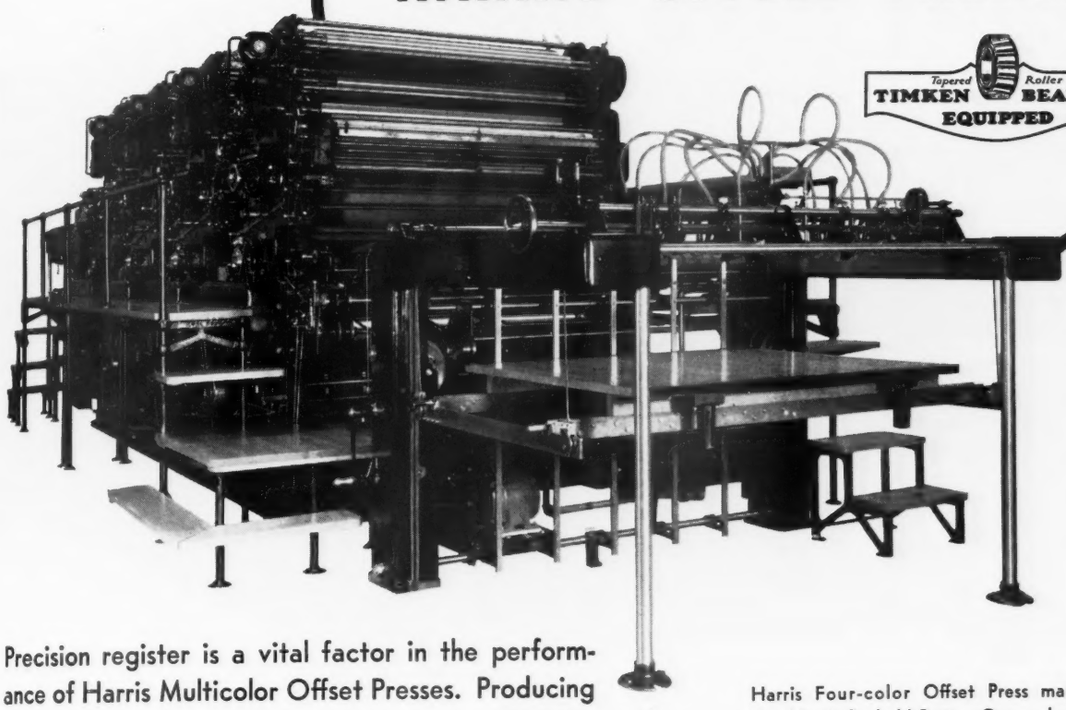
PLAINFIELD, NEW JERSEY NEW YORK OFFICE: 501 FIFTH AVENUE

# *Miles of Smiles*

## FOR USERS OF

# HARRIS OFFSET PRESSES

Tapered Roller TIMKEN BEARING EQUIPPED

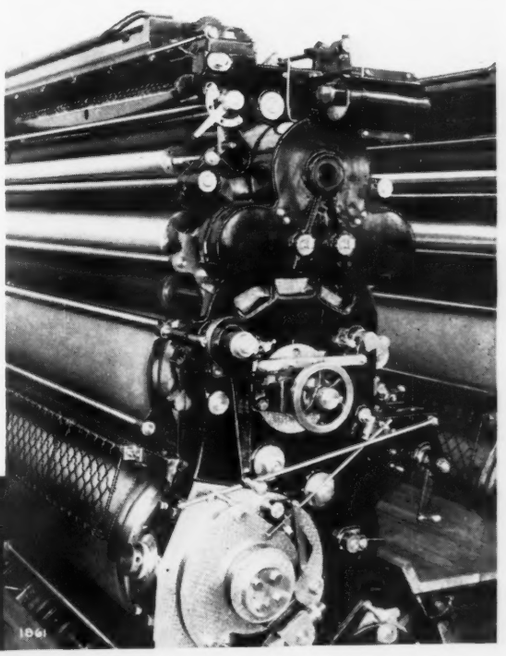


Precision register is a vital factor in the performance of Harris Multicolor Offset Presses. Producing and preserving this hair-line accuracy necessitates craftsmanship comparable with that required in making the finest watch.

Among other things, many cylinders must be kept in correct and constant alignment to assure perfect registration of the various impressions and uniform quality in the final result.

TIMKEN Tapered Roller Bearings help to maintain this alignment and resultant printing precision. In addition they eliminate friction, reduce wear to the vanishing point, carry radial, thrust and combined loads and thereby extend the life of the entire machine.

Harris Four-color Offset Press manufactured by the Harris-Seybold-Potter Co. and equipped with TIMKEN Bearings.



**THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO**

**TIMKEN**
**TAPERED ROLLER BEARINGS**

Manufacturers of TIMKEN Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; TIMKEN Alloy Steels and Carbon and Alloy Seamless Tubing; and TIMKEN Rock Bits.

explosive and which will not readily injure the machinist's hands. (Avoid such liquids as Ethyl gasoline, benzol, etc.)

The cam bar assembly is now ready for cleaning, but before immersing the cams in the cleaning fluid, pass a length of ¼ in. drill rod or cold-rolled steel through the large hole in the cams. This is to facilitate handling while cleaning, the reasons for which will become apparent as the work is undertaken.

A long handled fibre brush of the type shown in Fig. 2 is suitable for scrubbing the cams and yokes.

After the cam and bar assembly, the cam frame, and the rubber roll shafts have been scrubbed thoroughly, all of the parts may be dried with compressed air which is usually available in the printing plant. The air jet is directed on the cam wheels so as to air-dry the cam bearings while spinning.

[1]At this point it should be explained that if the keyboard is on a machine of an earlier model and is not supplied with dowels for the bars, it is best to drill holes and apply one dowel in each end of the bar near the fastening screw (both front and rear bars). The reason is obvious. On those keyboards where the bars are not doweled, the bar is sometimes returned to a slightly different position after cleaning so that the cams may not clear the stop strips or the ends of the yokes projecting into the guide plate slots may bind at one side in such a way as to prevent several of the cams and yokes falling by gravity when the operator depresses the keybuttons.

The next operation is to take the cam-bar assembly to a wire buffing wheel. As is shown in Fig. 3, the machinist is buffing vertical sides of the free ends of the cam yokes to a high polish. The idea in doing this is to discourage the collection of any gummy substance which would hold the cam yoke in a suspended position and thus cause non-response when the operator depresses a key button. The ¼ in. length of drill rod shown in Fig. 2, may be reinserted if the smooth section of the cam peripheries are to be polished.

After the cams and yokes have been polished with the wire buffing wheel as described above, the cam assembly is inserted in a bench vise as shown in Fig. 4, where the cam bearings are lubricated with clock oil. While it is generally customary to employ a section of small-diameter wire or pointed hardwood toothpick for the purpose, it will be noticed that at the *Plain Dealer* a Pres-to oiler is used for applying the clock oil to each side of the cam bearing. After application of the oil, each cam is spun a few revolutions to encourage the oil to flow into the bearing. Occasional excess oil is carefully wiped off.

One of the important operations in keyboard cleaning consists of wiping out the guide slots in the cam frame back plate (Fig. 5). Simply wrap a clean cloth about a pointed wooden stick and change the wiping surface of the cloth every half-dozen slots. Buffing the ends of the cam yokes, plus wiping out the guide slots in which the yokes work is a certain preventive for failure of the cam yoke to fall when the operator depresses a keybutton.

Because the duty of the trigger is relatively light, most machinists do not oil the trigger bearings nor remove them from the frames. If one is "fussy," however, clock oil may be applied to the trigger bearings.

In cleaning a Linotype keyboard, don't forget to lubricate the overthrow plungers in the spring bar. Fasten the assembled bar in a bench vise and while holding each plunger in a raised position with a small screwdriver, apply clock oil at both top and bottom sections of the plunger.

After the cam-bar assembly has been cleaned, dried and lubricated as described above, the assembly is returned to its position in the cam yoke frame. At first thought, it would seem to be a difficult matter to reinsert the ends of the yokes in the guide plate slots. This may be accomplished easily, however. Place the frame, guide slot side down, on two pieces of Elrod, monotype, stereo or wooden base upon the bench. Start the yokes into the slots on an angle and push them into the slots with a circular motion while grasping the bar, finally bringing the bar to rest on the frame, after which the fastening screws are inserted and turned up tight.

After the locking wire has been inserted through the triggers and the rubber roll shafts have been lubricated and returned to bearings in the cam yoke rames, the frames are ready for replacement on the machine keyboard.

At the *Plain Dealer*, it is customary to blow off with compressed air the keyboard parts, giving special attention to the banking bars which are first squirted with cleaning fluid (Mineral Spirits, or other solvent) by means of a long spout oil can. A dusting of the keybars after cleaning with dry graphite and a brush is beneficial. The keybuttons are cleaned with ammonia and a cloth. The cam frames are now returned to position, the trigger locking wires withdrawn, the tray and cover are replaced and the keyboard is ready to operate.

This completes description of the essential operations which have been substituted for the older keyboard cleaning methods as used by Mr. Lind at the *Plain Dealer*.

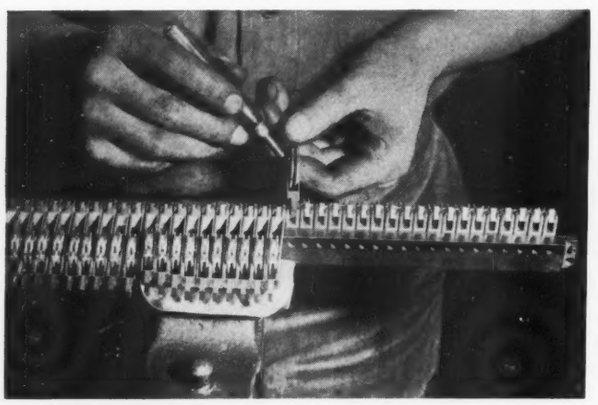


**Fig. 4 — The cam-bar assembly is placed in a bench vise while each side of the cam pivot is oiled with clock oil applied with a Presto Oiler. Each cam is twirled several revolutions after oiling to insure that the oil will reach the bearing.**

**Fig. 5 — An important part of the keyboard cleaning operation is to wrap a clean wiping cloth around a pointed wooden stick to remove any dirt or accumulated gummy substance from the cam yoke guide slots in the cam yoke frame.**

## *New C-H Appointee*

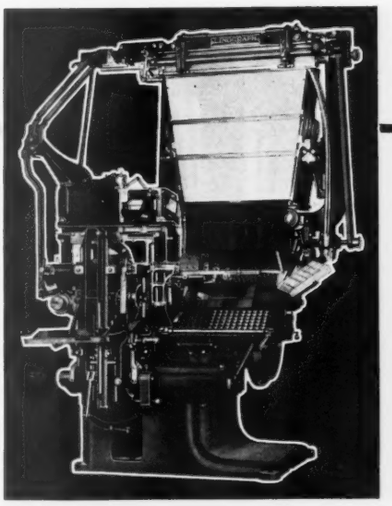
Cutler-Hammer, Inc., announces that G. E. Hunt has been appointed to take charge of the company's Indianapolis (Ind.) office located at 307 N. Pennsylvania Ave. This office is under the supervision of C. J. Maloney, manager of the Chicago district.

**Paper Trade Name Index** published for the first time in the 1940 P-Double-E Reference Issue, contains 420 trade names of paper stocks and 99 names of companies manufacturing or dealing in those stocks.

# LINOGRAPH "50"

## WILL COMMAND YOUR RESPECT TOO

**when you see it at the DRAKE**



EVERY A. N. P. A. Mechanical Conference marks another milestone for the LINOGRAPH "50". Two years ago the first LINOGRAPH "50" was shown at the Mechanical Conference in Toronto, Canada. It drew much favorable comment at that first showing, as well as at the next Mechanical Conference in Philadelphia. The "proof of the pudding," however, is still "in the eating"— in the performance of the equipment in actual, every-day use. The LINOGRAPH "50" has most successfully "run the gauntlet" of day-in-day-out production service. It has been installed in all types of plants under every condition— in large dailies, small weeklies, large and small commercial plants, publishing houses and trade composition plants. Everywhere it has met the requirements and more. The favorable comments on the LINOGRAPH "50", made at these Mechanical Conferences, have been fully justified. Frequently people tell us that we do not place sufficient emphasis on the fine features of this machine but we prefer to have you inspect it, try it and see for yourself.

The LINOGRAPH "50", with certain refinements added where intensive operation seemed to require such refinement, is again being shown at the A. N. P. A. Mechanical Conference in Chicago this year. Visit our space, Booths 41 and 43, or see our permanent exhibit at the factory. We will be glad to answer questions and discuss your requirements. We are sure that you, too, will freely grant the LINOGRAPH "50" your confidence and respect.

***Visit the impressive Linograph Display at the A. N. P. A. Mechanical Conference . . . Drake Hotel, Chicago, June 10, 11, 12. Booths Nos. 41-43.***

# LINOGRAPH CORPORATION

DAVENPORT — IOWA

# EQUIPMENT *and Supplies*

## *Features of New Scott Newspaper Press*

In discussing the Miami *News*' new Scott Extra High-Speed Double Octuple Printing Press, which has been erected and is now being used for printing the daily and Sunday editions of the Miami (Fla.) *News*, executives of Walter Scott & Co. state that the press is a further refinement of the preceding Scott 60,000-per-hour enclosed gear unit.

Among the important features incorporated in the design of the press, Scott lists the following: (1) Modern alloy gear steels for strength and durability; (2) A relative quietness of operation; (3) Automatic lubrication; (4) Spring-seated Duprene oil seals to prevent loss of oil through leakage; (5) Truly concentric gear mounting with heat-treated chrome-molybdenum steel bolts producing permanent disk clutch grip; (6) Silent drive for vibrating ink distributing drums; (7) New rigidity and uniformity of impression and smoothness of ink distribution; (8) Important space saving; (9) Operating safety with convenient access to all adjustments.

**Space Saving —** Manufacturer states that by eliminating the unused length of printing cylinders and associated parts, the press side frames have been brought 10½ in. closer together. The overall width of the new Scott Unit is 105¾ in. as compared with 128 in. of the previous design — a space saving of 22¼ in. widthwise of each line of presses. This is equivalent to a saving of 70 sq. ft. of pressroom space per octuple press. By increasing the shaft diameter of the printing and distributing cylinders, outboard bearings for smaller shafts, and by the use of alloy steel disk gears bolted to the shafts, the projection of guards and oil enclosures has been reduced.

**Rigidity of Impression —** The solid forged steel printing cylinders have been supplied with 6 in. diam. integrally forged shafts carrying through-hardened SAE roller-bearing alloy steel sleeves 6½ in. diam. These, manufacturer states, coupled with the 80 in. distance between frames and firmly mounted bearings, provide a perfectly rigid and unvarying printing impression which does not change at any speed.

The impression adjustment is by a slightly eccentric journal box fitted with micrometer worm adjustment and positive lock, permitting accurate and minute adjustment while at a standstill or while the press is running.

**Ink Distribution —** Manufacturer also states that the ink distribution with two 10 in. diam. vibrating cylinders, with all 9 inking roller contacts vibrating, and with its drive free from pulsation and shock due to reversal of vibration and ductor motion cam action, provides uniform application of ink; also, due to the shortening of all inking rollers and cylinders by 10½ in. which brings the journals close to the inking surfaces, the entire ink distributing system is more rigid.

The ink feed is from fountains with micrometer adjustment keys at the ends of the fountains. The ductor motion driven directly from the main press shaft, it is stated, is designed for accurate operation and ducts exactly the same amount of ink per duct regardless of press speed.

**High Speed Main Drive —** The main drive and the unit drive are through forged steel shafts carried in oversize SKF high-speed ball bearings and making 4 revolutions for each printing cylinder turns instead of from 1 to 2 turns per cyl. rev. as heretofore. This 4 to 1 ratio reduces torsion and driving strain on shafts and gears to one-half or less of the torsion heretofore used.

It is stated the 8 in. main unit spirally cut miter driving gears (made from SAE alloy gear steel) are hardened, ground and lapped for perfect mesh and silent running. Each pair of these gears is guaranteed for 24-hour continuous-operation load in industrial (not automotive) use of 244 h.p. with 50% safe overload capacity, equal to 366 h.p. safe load — more than 9 times the maximum power ever required to run the press unit at top speed.

The main unit driving gears and the printing cylinder driving gears are housed in self-oiling oil-tight cases.

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## *Diminutive Ball Bearings*

Norma-Hoffmann Bearings Corporation announces that its diminutive size precision ball bearings, down to ⅛ in. bore, and which have been heretofore available in the "full" (retainerless) type, can now be obtained as standard with retainers (or ball cages).

The dimensions of these diminutive ball bearings are as follows:

| Bearing No. | Bore | O. Dia. | Width |
|---|---|---|---|
| N-463-R | 1/8″ | 3/8″ | 5/32″ |
| 4666-R | 3/16″ | 1/2″ | 5/32″ |
| XA-134-R | 1/4″ | 5/8″ | .196″ |
| XA-134-R-P | 1/4″ | 5/8″ | .196″ |
| XA-134-R-PP | 1/4″ | 5/8″ | .196″ |

Having the same dimensions as the XA-134, the XA-134-R-P is available with single side plate and the XA-134-R-PP with two side plates.

A new data sheet covering these small bearings can be obtained upon request from Norma-Hoffmann Bearings Corporation direct, or in care of *Printing Equipment Engineer*.

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## *Star Automatic Feeder*

Linotype Parts Company announces that it has been granted a patent on an automatic metal feeder for use on line-composing and type-setting machines. The chief characteristic of the feeder states manufacturer, is that the casting of one slug on a line-composing machine, for instance, may cause the feeder to go into action, thus permitting the pig to be melted at a rate in direct proportion to the withdrawal of molten metal from the pot crucible.

The feeder mechanism is self-actuating. With metal in the pot at full height, the float attached at the lower end of the chain rests upon the surface of the metal. Lowering of the metal level in the pot puts a sufficient amount of weight on the chain supporting the float to pull down a lever to release a brake mechanism, which in turn releases the pig. As soon as the original pot metal level has been restored, the float again rests on the surface of the metal, locking the pig-releasing mechanism.

Further information may be obtained from The Linotype Parts Company direct or in care of *Printing Equipment Engineer*.

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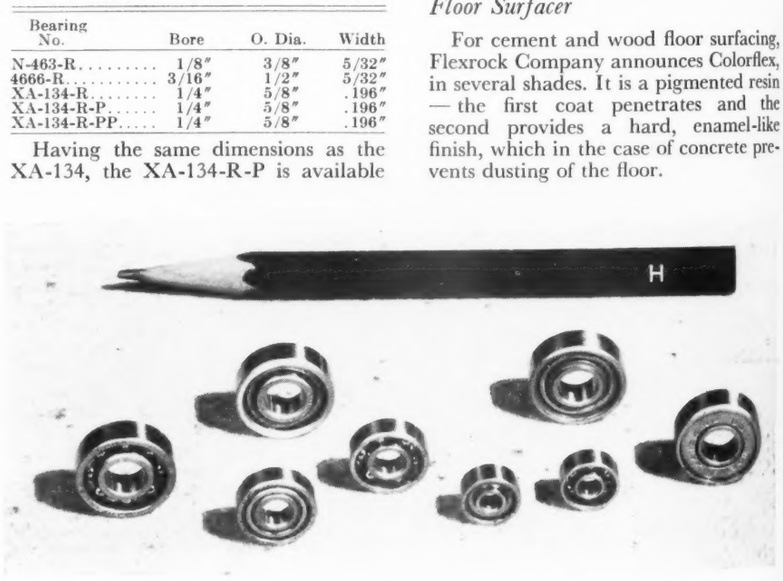
## *Floor Surfacer*

For cement and wood floor surfacing, Flexrock Company announces Colorflex, in several shades. It is a pigmented resin — the first coat penetrates and the second provides a hard, enamel-like finish, which in the case of concrete prevents dusting of the floor.



# WELCOME...

## *to these new Klean-O-Mat users*

*There is a Klean-O-Mat Machine Model For Every Plant*

- Richmond (Va.) News Leader
- Philadelphia Daily News
- Jacksonville (Fla.) Journal
- Huntington (W. Va.) Advertiser & Herald-Dispatch
- Winston-Salem (N. C.) Journal & Sentinel
- St. Petersburg (Fla.) Times
- Brockton (Mass.) Enterprise-Times
- Charleston (W. Va.) Gazette
- Durham (N. C.) Herald & Sun
- St. Petersburg (Fla.) Independent
- Clarksburg (W. Va.) Exponent & Telegram
- Lexington (Ky.) Herald-Leader
- Salisbury (N. C.) Post
- Fitchburg (Mass.) Sentinel

THESE are just a few of a long and constantly increasing number of dailies to adopt the Klean-O-Mat Process — the modern, machine method of cleaning a magazine and font of matrices in 35 minutes . . . *without running the matrices out of the magazine.*

Klean-O-Mat is a composing room improvement which no operator of costly machine equipment can afford to be without. It spells R-E-L-I-E-F to foreman, machinist and operator alike. With matrices and magazines as clean as a shark's tooth, precisely made machines and human operators can function *at their best* . . . in combination with each other.

No one would drive an automobile with the brakes on. Operating line-casting machines with dirty matrices running in dirty magazines really doesn't make any better sense.

### *Stop Errors at the Source*

Why permit mechanical errors to occur in the assembler or pass into the proofs if they can be stopped at the source? *Prevent them from being born!*

Take the brakes off matrix response. Get rid of that sticky, gummy film of dirt on matrices and in the magazine channels which is now causing matrices to hesitate or hang. Then watch transpositions and other mechanical errors disappear.

Let the Klean-O-Mat Process *through cleanliness* show you the way to better machine production. Write us today.

## KLEAN-O-MAT CORPORATION

60 East 42nd St. . . . New York City, U. S. A.

### *Chemical Rubber Gloves Withstand Use*

After more than a year's daily use by offset platemakers and by offset pressmen in a mid-western plant, "Stanzoil" Industrial Gloves (Du Pont Neoprene) made by the Pioneer Rubber Company,

**Indicated is a small break occurring in chemical rubber glove which had been used in an offset printing plant after more than a year's daily use.**

show no actual failure other than a tiny break at the right thumb.

During the year, the gloves gradually became checked and roughened under the action of the acids used, but the surface did not yield elsewhere on either glove, even when closed at the wrists and tested by compressed air.

During several months' wear by offset platemakers, the "Stanzoil" Gloves were subjected continually to contact with: (1) Alcohol, (2) Turpentine, (3) Benzol, (4) Lacquer (amyl acetate), (5) Phosphoric acid, (6) Chromic acid, (7) Nitric acid, (8) Acetic acid, (9) Strong calcium chloride solution and hydrochloride and lactic acid, (10) Strong solution of ammonium bichromate and gum.

In the pressroom, they protected wearers' hands against: (1) Offset ink, (2) Roller washes, (3) Type washes, (4) Carbon disulphite and sulphur, (5) Gasoline, (6) Naptha.

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### *Synthetic Proof Press Rollers*

The new Vandercook Synthetic Inking Rollers are now standard equipment on all Vandercook Automatic Inking Proof Presses. The rollers produce fine quality printing. They are not affected by temperature changes or hot metal, do not shrink or swell, states manufacturer. Once properly set, they require no resetting, will last for years, and can be inexpensively reconditioned.

**View of Universal Mono-Tabular Broach. Has extension gauge for broaching 24-in. strips.**

### *Universal Mono-Tabular Broach*

The Universal Mono-Tabular Corporation has announced its Universal Mono-Tabular Broach. This machine broaches strip rule cast from Monotype, Elrod, Linotype, Intertype, or other material devices. The down lines in tabular composition are obtained by inserting specially designed vertical brass rule in broached openings of horizontal rule.

The broach is practically set for 90% of the ordinary run of ruled form jobs, and by the use of a copy-setting gauge, manufacturer states, the punches can be set for the most complicated form in less than five minutes time, as a movement of the finger positions the punches exactly where needed. It has an extension pica gauge, marked off in points, which allows the broaching of full 24-in. strips, and also makes it possible to get non-standard spacing or spacing as close as 6 points. It produces a solid form in which type matter can be inserted wherever required.

An important new feature of the broach is a leveling adjustment which enables the operator to set the rule for broaching at exactly the required depth, eliminating high rules, and insuring smooth even impressions, with minimum makeready.

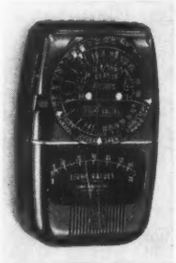
Standard equipment consists of the broaching unit, with 15 punch assemblies, cabinet providing storage space for 1000 lbs. of strip material, adjustable overhead light, five Mono-Tabular Matrices for table form work on Linotype or Intertype, and 1 lb. sample of vertical brass rule. Overall size is 16 in. by 28 in. by 38 in. high.

---

### *G-E Exposure Meter*

A new photographic exposure meter is announced by General Electric. One-hand operation is made possible by the special calculator arrangement, the spring-actuated hinged cover, the new locking device, and the streamlined case.

**G-E's new photographic exposure meter—has one-hand operation.**



The new meter is calibrated to measure light in standard foot-candles; by means of incident light and the hinged cover, a single scale on the meter covers a range of sensitivity from 0.05 to 1700 candles per sq. ft. The new locking feature permits the locking of the calculator after a reading is taken.

Other features of the new exposure meter are the simplified calculator which meets universal demands for still, color, and movies; the self-multiplier on the calculator which automatically multiplies exposure when the meter is used for incident light measurement in very dim light; film values up to 800; F stops from F-1 to F-44 and shutter speeds from 1/2500 second to 100 seconds.

---

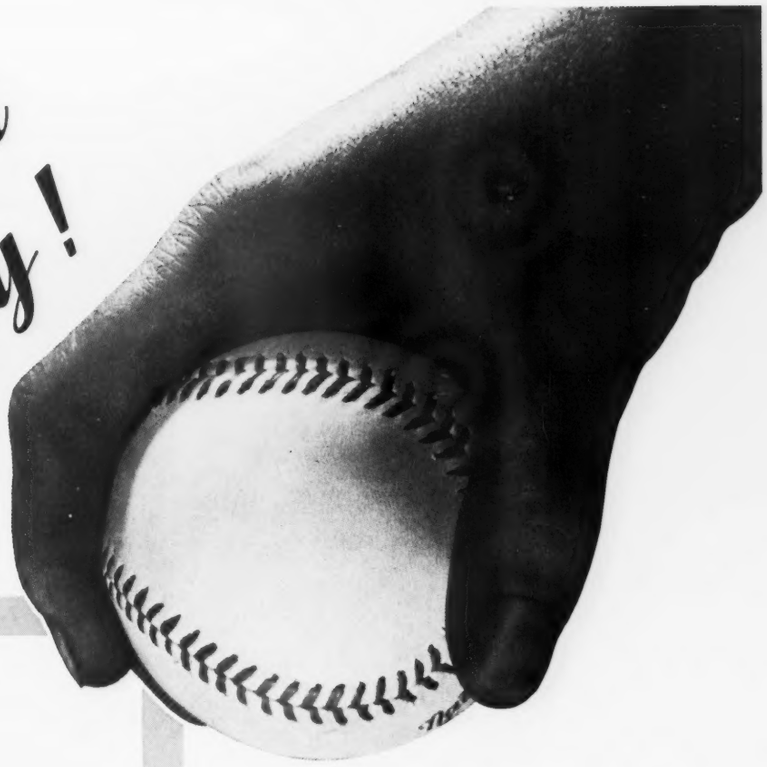
### *Fluorescent Luminaire*

A new 48-in., 2-lamp, 40-w. fluorescent luminaire with spread distribution designed for general or supplementary lighting in low bay industrial areas is announced by the Westinghouse Electric and Manufacturing Company. The units are furnished wired complete with hood, reflector, lamp holder, lamp starter and ballast equipment for 110-125, 199-216 or 220-250 v. circuits.

The hood is of sheet-steel hinged to the reflector with knockouts at each end to provide for end-to-end mounting and straight-through wiring. Finish is of smooth silver gray baked enamel. The reflector is white porcelain enameled steel, and has an over-all efficiency of 78% with a cutoff of 72½ deg. from vertical when viewed normal to the lamp.

Units are arranged for rigid conduit, flexible conduit, or chain suspension mounting. When rigid or flexible conduit is used, two ½-in. knockouts are provided on 30 in. centers on the top of the hood.

*speed and accuracy!*



Illustrated above Hammond EasyKaster "8" with 800 pound valve controlled melting pot. Available also without melting pot and with special casters for use in plants equipped with large metal furnace.

# PUT IN A NEW PITCHER

**Pitch straight, fast ball right over the plate with a Hammond EasyKaster "8". Cut out double casts, triple casts and foul balls.**

**If you haven't a modern melting furnace, stop waiting for a slow warm up and stop tossing liquid metal around by hand. Keep 800 pounds of sizzling metal in the box. Do what others are doing . . . cut your casting time and go to press on schedule. Many users are getting their plates through two and three times faster.**

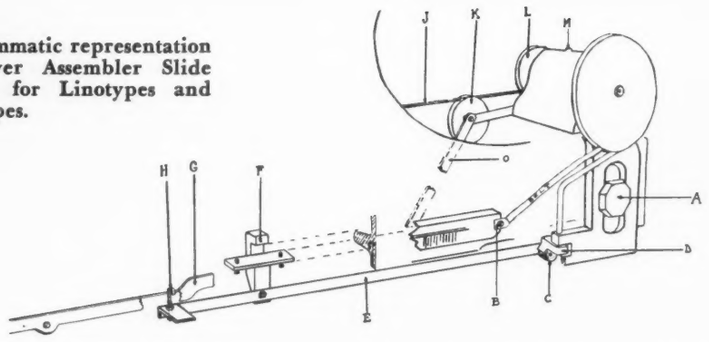
**For better plates and faster casting, write for literature, prices, terms and trade-in allowances. No obligation.**

Hammond Machinery Builders INCORPORATED

KALAMAZOO, MICHIGAN, U.S.A.

**1604 DOUGLAS AVE.**

**Diagrammatic representation of Power Assembler Slide Return for Linotypes and Intertypes.**




### *Power Assembler Slide Return*

Geo. Pankuch & Associates have announced a Power Assembler Slide Return for application to Linotypes and Intertypes. The assembler slide is automatically returned to normal position when the operator raises the assembling elevator to send in a matrix line. A clutch mounted above the machine's face plate right-hand screw draws the assembler slide to the right through a steel tape linkage when permitted to do so as the operator raises the assembling elevator.

To explain operation of the device, it may be stated that the clutch element *M* is mounted at the right-hand side of the face plate under face plate screw A. Pulley *L* mounted on clutch shaft extending through casting *M* revolves constantly through contact with belt *J*. Pulley *K* is merely an adjustable idler to maintain correct belt tension against pulley *L*.

The assembler slide is connected to the clutch by a thin steel tape at *B*. The block *F* mounted on the back lower edge of the face plate supports lever *E*. The left end of lever *E* is connected to assembler slide brake releasing lever *G* by an adjustable hook at *H*.

As the operator raises the assembling elevator to deliver a matrix line into the delivery slide, lever *G* permits lever *E* to actuate clutch lever hub at *D* to throw the clutch facing inwardly against the clutch pulley mounted on the same shaft as driving pulley *L*. This action causes the clutch facing at the right side of the diagram (large pulley) to rotate counter-clockwise causing the assembler slide to return to normal position through its connection with the steel tape.

---

### *Stoker Service Control Relay*

The General Electric Company at Schenectady has recently announced a new relay for controlling a stoker in conjunction with time switch, limit controls, and room thermostat. It can also be used as a relay for blower motors of unit heaters controlled from room thermostats; as a relay between room thermostat and condensing unit in central plant-cooling systems; and as a relay between humidistat and humidification systems.

This single-pole relay combines in one compact assembly a relay, low-voltage control transformer, and terminal board. It is designed primarily for use in conjunction with a hold-fire timer and limit control to form a complete stoker-control system. It also provides a simple control link between any low-voltage control instrument and power equipment. The transformer provides low voltage for use with a day-night clock or stoker timer.

Six terminals on convenient terminal block provide means for line, load, and limit control connections, without the use of a connection box. There are three conduit openings for interconnecting with other control devices.

---

### *Airoperated Process Unit*

An airoperated process unit to prevent offset on freshly printed sheets, has been announced by Paasche Airbrush Company. The unit is designed for use with small presses and for treating sheets up to 30 in. width.

This streamlined unit is a self-contained one-gun gravity feed airoperated unit and is equipped with a ½ h.p. portable air compressor, delivering 2.2 cu. ft. at 35 lbs. pressure.

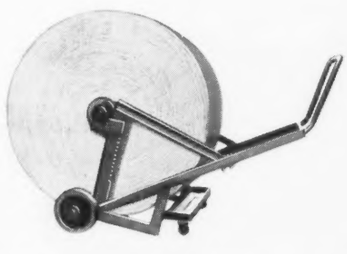
Unit is supplied with pop-off safety valve; water, oil and dirt separator; copper cooling coils; rubber wheels with locking brake and cord and plug.

---

### *Paper Roll Truck*

A roll truck for handling paper rolls in mill, warehouse and pressroom has been announced by the Barrett-Cravens Company.

Of all-welded steel construction, reinforced for rigidity, these units consist of two vertical supporting members which are toothed to engage the spindle supporting arms so that they can be adjusted for rolls of any diameter within the range of the truck's capacity, which is 44 in. wide and from 48 in. to 96 in. diam.



**View of Barrett-Cravens Paper Roll Truck**

The truck with the spindle removed is made to straddle the roll, next the spindle is passed through the roll core, the arms raised to slightly higher than the spindle's height so that the rear wheels of the truck are lifted as the truck is pushed forward to engage the arms under the spindle ends. Next, the operator bears down on the handle. As the rear wheels go down to contact the floor, the roll is lifted and becomes entirely supported by the spindle in horizontal position.

The front wheels are 9 in. diam. and the swivel wheels are 4 in. in diam., mounted on anti-friction bearings.

Trucks have inside clearances of 36 in., 42 in. or 48 in. Load capacities are 3500 lbs. Literature is available from the manufacturer.

---

### *Composing Room Saws*

Three bench and three cabinet models of composing room saws have been announced by American Type Founders for sawing, trimming, mitering and grinding. Features included are: (1) Rapid-set automatic mitering device; (2) Automatic V-belt equalizer for constant power application; (3) Mechanical work-holding clamp; (4) Trimmer knife adjusting disk; (5) Self-aligning, semi-sliding table on V-tracks (full sliding on De Luxe models); (6) Sealed-in bearings for operation without oiling or adjustment.

**View of DeLuxe Cabinet Model, one of several composing room saws announced by ATF.**

The ATF pica gauge with micrometer points used on these machines can be adjusted to points and thousandths of an inch. Mortising and undercutting are

# "FENWAL INCORPORATED"

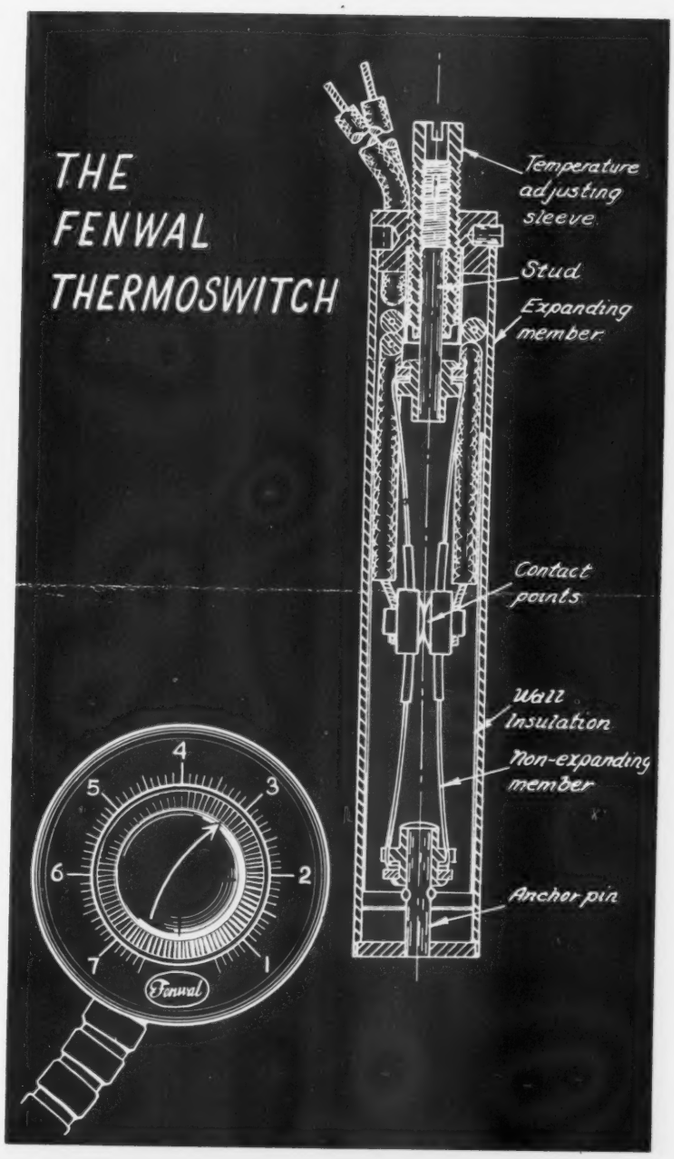
## *Presents*

A UNIQUE thermo-responsive electric switch that sets a new standard for the electrical industry and offers the design and maintenance engineer new opportunities for better heat regulation at low cost.

THE THERMO-responsive element is the outer shell. The contacts are mounted on a biconcave compression member of thermally inert metal which presses them together firmly while they are closed. When the shell is expanded by heat the contacts are pulled apart forcibly at a predetermined setting.

THE MOVEMENT of the contacts comes under the classification of a slow break which is becoming generally recognized as the best for A.C. use. However, the separation of the contacts, or vice versa, is approximately 20 times the lineal expansion of the thermo-responsive outer shell so that the break is definite with minute changes of temperature.

The force required to overcome contact pressure is sufficiently great to prevent vibration of the contacts. The switch therefore provides a DEFINITE, SLOW, VIBRATION-LESS break. The contacts are permanently sealed within the shell which eliminates trouble due to dust, dirt, vermin, and tampering.




- **HEATING**
  - Molding press platens
  - Baby incubators
  - Soldering fixtures
  - Rubber vulcanizers
  - Biological incubators
  - Baking ovens
  - Hot water bottles
  - Oil baths
  - Packaging machines
  - Pasteurizers
  - Drying ovens
  - Diesel engines
  - Radio crystals
- **COOLING**
  - Mechanical refrigeration
  - Ventilating fan
- **PROCESSING**
  - Timer control
  - Time delay switches
- **SAFETY**
  - Low water
  - Overheated bearings
  - Overheated engines
  - Overheated motors
  - Overheated transformers
  - Fire alarm
- **SOLENOID**
  - Automatic sterilization
  - Instantaneous bath water
- **DOMESTIC**
  - Limit switch
  - Oil burner control
  - Hot water tanks
  - Room thermostat

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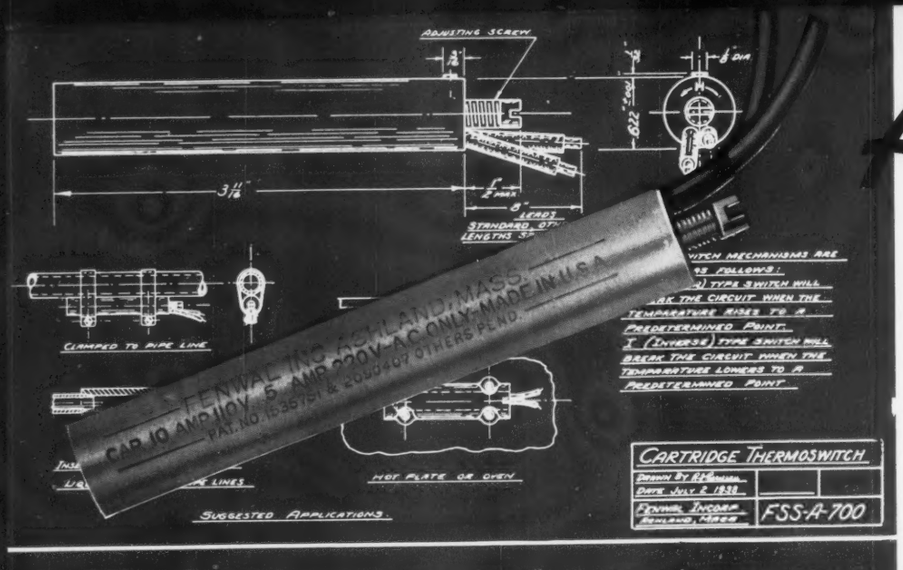
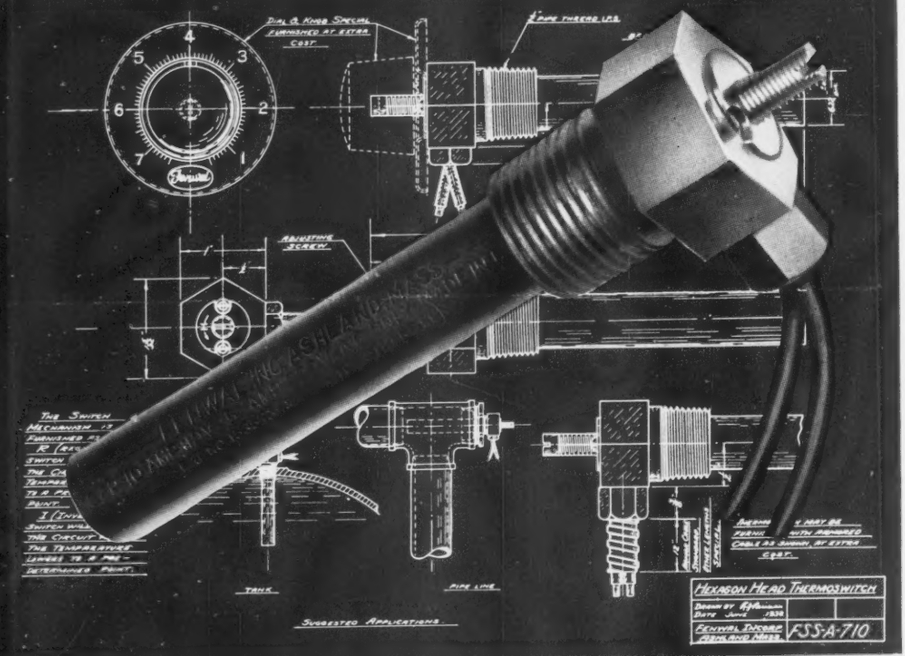
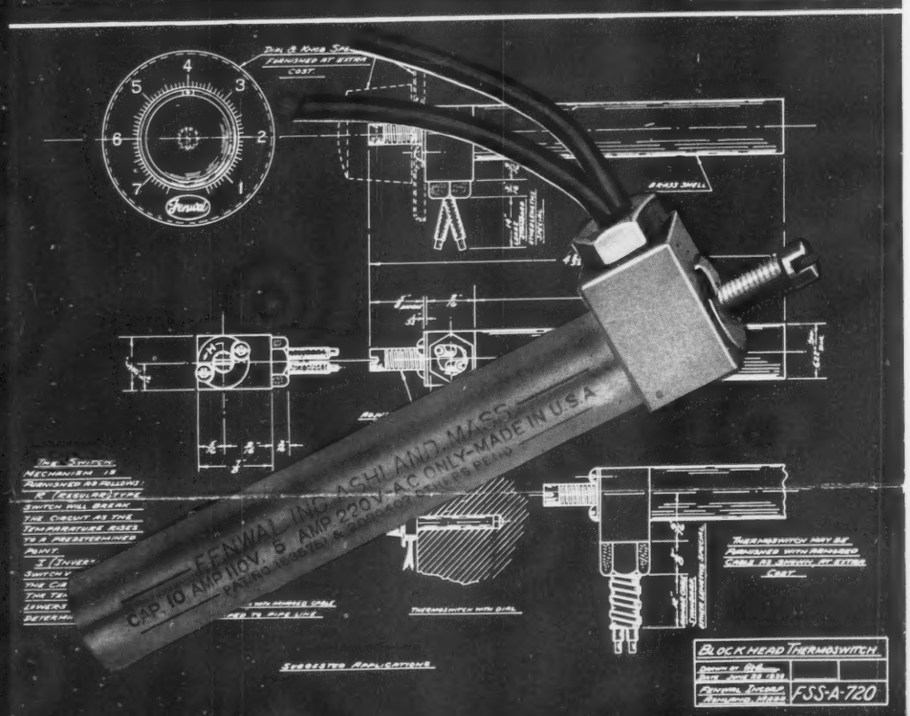



# An "Introdu

## CARTRIDGE THERMOSWITCH NO. 732RC

The Fenwal Cartridge Thermoswitch was
fected to meet the demand for a compact,
cient, self-contained control which can
applied as readily as the cartridge type heat
unit.

## HEX HEAD THERMOSWITCH NO. 732RH

The Hex Head Thermoswitch is designed
insertion into a closed liquid or gas system
means of a ½" standard pipe thread. Where
liquid or gas has no corrosive action on br
or silver solder a well is unnecessary and
disadvantage of using a well is avoided. Th
may serve as pressure limiting switches
stoker-fired boilers and oil burners. Also th
are able to render the quick response so essenti
for satisfactory control of instantaneous wat
heaters. Repeat orders from the molding
dustry attest to the satisfactory performance
the switch for controlling the temperature
molding press platens.

## BLOCK HEAD THERMOSWITCH NO. 732RB

The Block Head Thermoswitch possesses
advantages of installation characteristic of
Cartridge Thermoswitch plus provisions for
taching a dial and knob for adjustment and
enclosure of the leads in an armored cable.
is a rugged all purpose thermoswitch that
be safely used where equipment has not b
designed for one of the other specialized ty
of thermoswitches.

**EXCLUSIVE features include the follo**
**RUGGED Thermoswitch with ± 1**
**Thermoswitches can be supplied fo**
**PRACTICALLY NO THERMAL LAG;**
**ment; and unlimited UNDERSHOOT.**

*Our engineers will*
*the application of*

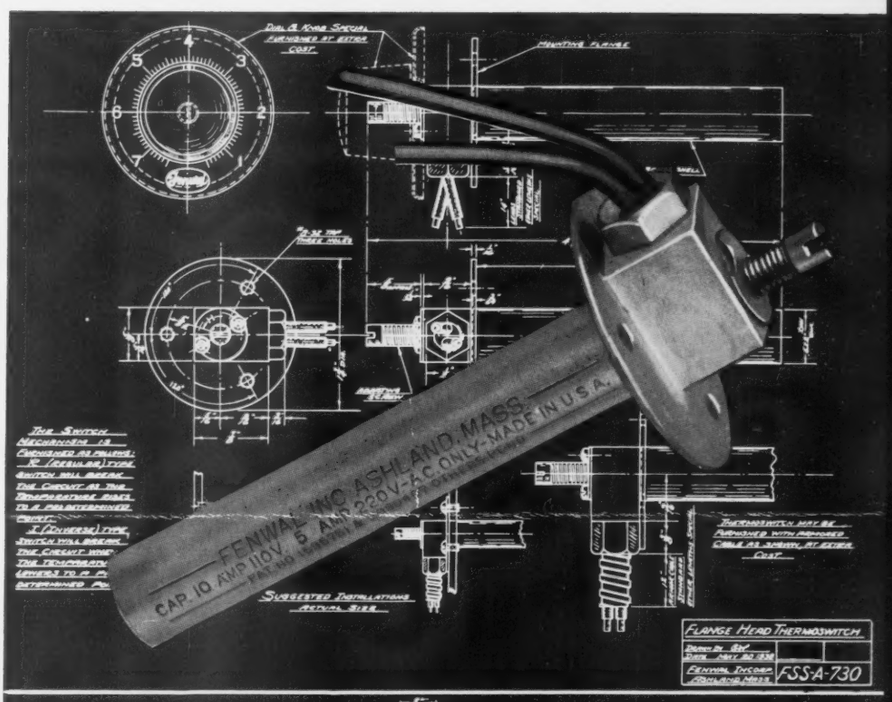
# troduction" to
# . THERMOSWITCHES

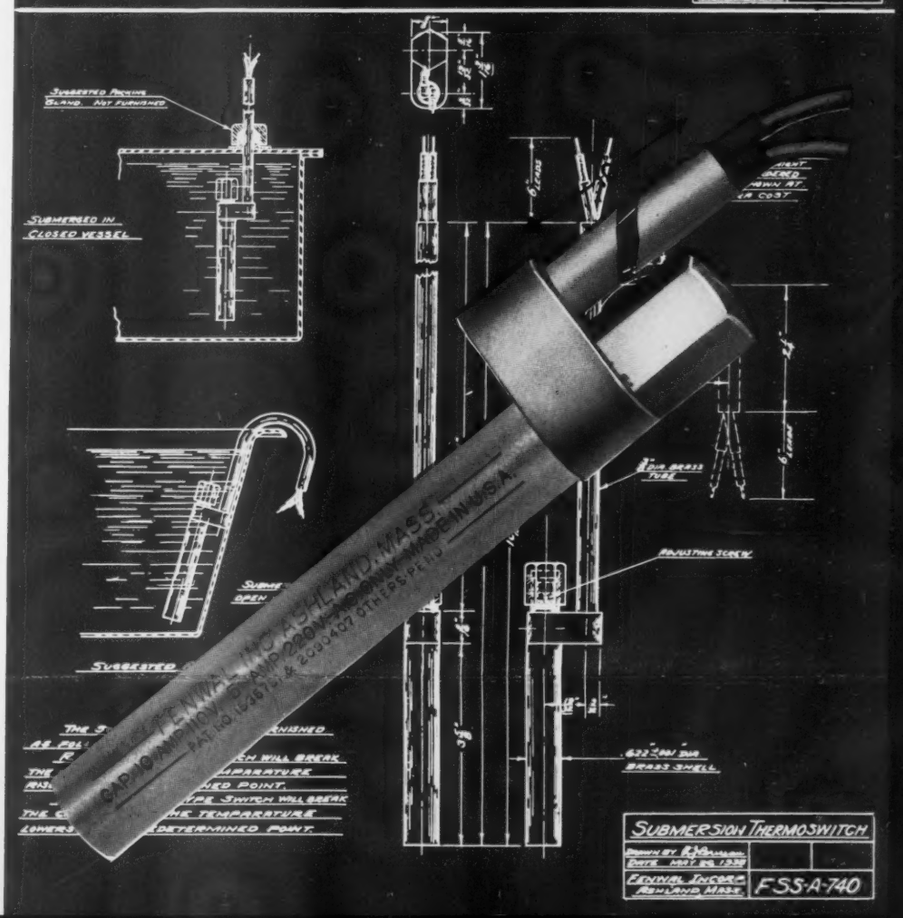
## FLANGE HEAD THERMOSWITCH NO. 732RF

The easy adaptability of the Flange Head Thermoswitch permits substantial savings in manufacture which, together with the unique characteristics of the thermoswitch, warrant the immediate incorporation of this switch in your product. This thermoswitch is especially suitable for use as a control in incubators, ovens, ducts, biological incubators, warming closets, and as a limit switch for furnace bonnets.

## SUBMERSION THERMOSWITCH NO. 732RS

The necessity for a water-proof and vapor-proof thermoswitch led to the development of the Submersion Thermoswitch. The thermo responsive element is similar to that in other Fenwal thermoswitches, the modification consisting in the provision of a hermetic seal for the adjusting screw and a water tight conduit for the leads. When used under hazardous vapor conditions the open end of the conduit should be sealed. This can be done readily by attaching the conduit from the thermoswitch to a vapor proof junction box by means of a tubing adapter. For use in damp locations, where there is excessive condensation, or for refrigerator service the conduit should be plugged by inserting a small wad of asbestos along the leads and sealing the tube with an inch of asphalt pitch.


FENWAL INC ASHLAND, MASS.
CAP. 10 AMP 110V. 5 AMP 220V-AC ONLY-MADE IN U.S.A.
PAT. NO. 1,967,514 & 2,030,407 OTHERS PEND.
SUGGESTED INSTALLATIONS
ACTUAL SIZE
FLANGE HEAD THERMOSWITCH
FENWAL INCORP ASHLAND MASS.
FSS-A-730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FENWAL INC ASHLAND, MASS.
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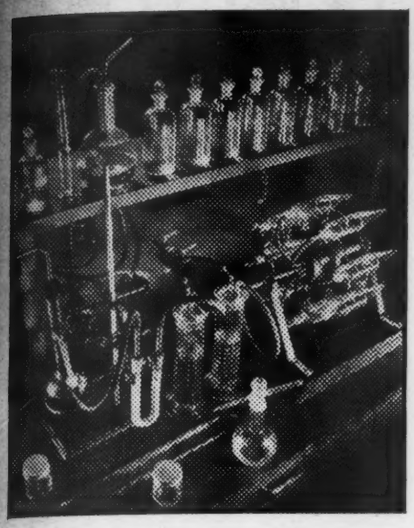
# Keeping IPI in Touch

PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION • JUNE, 1940

## Chemical Ferris Wheel Gives Evaporation Rates

The last few years have brought great advances in printing inks, and many of these advantages have been concerned with drying time. For instance, the quick-drying Vaporin inks, Lithox for lithography, Holdfast, new pigmented aniline-type inks, and other recent developments have made significant contributions to the Graphic Arts by virtue of their faster drying properties.

Evaporation rate of ink solvents has a definite relationship to ink drying time. So the precise measurement of this characteristic is an important operation in The Research Laboratories of Interchemical Corporation, parent company for IPI.

The "Ferris wheel" apparatus shown here is ingenious. It determines simultaneously the evaporation rates for several materials. Like much of the Laboratories' equipment, it was specially designed—designed to do a job which contributes to finer printing.

## *Uncle Sam Likes His Own Advertising*

*While some departments of the Government seem to be giving advertising quite a kicking around, other departments are finding it to be useful as a method for stimulating sales. The Treasury Department's savings bond division reports that every promotional dollar expended thus far has produced $1,000 in bond business. Not a bad return.*

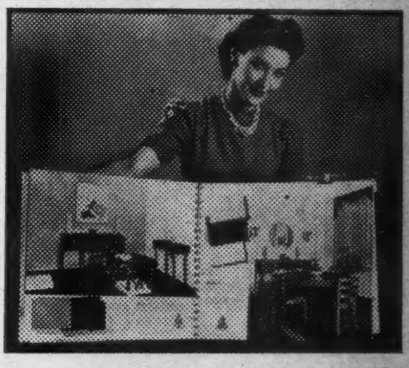
# STYLE GUIDE CALLED PRINT JOB OF DECADE

"Outstanding in the Graphic Arts as the job of this decade." That phrase was quoted in a current magazine as descriptive of the new Sherwin-Williams "Paint and Color Style Guide," an elaborate book containing 236 photographs of home exteriors and interiors.

A first edition of 25,000 copies was produced, at a cost estimated at somewhat more than $10 a copy. The "Style Guide's" reception has been so encouraging that another edition is already on the presses of the book's printers, Davis, Delaney & Harrs, New York City.

**Distinguished List Using IPI Inks**

Like the "Treasury of Art Masterpieces," the Art Directors' Yearbook, "U. S. Camera Annual," the new Kodachrome book, and other



fine volumes, the Sherwin-Williams "Style Guide" was printed with IPI inks. When printers want to *know* the ink will be right, they call on IPI.

## Perfumed Ink May Prove to Be Embarrassing

Shades of Horace Greeley! The printer's devil now smells like a geranium, and a rich lush odor of crushed roses pervades the pressroom. For the boys are mixing up the latest batch of delicately scented inks to print an advertisement for a new kind of perfume.

To the old giants of journalism, the pungent smell of printer's ink was the very elixir of life. But now, what a difference there can be in that smell! From Los Angeles to Connecticut, with plenty of stops in between, come reports on the growing use of various types of perfumed and flavored inks.

In St. Louis, a newspaper advertisement wafted the gentle aroma of Potpourri perfume towards the reader. In Chicago, inks used to print an advertisement for chewing gum were flavored with cinnamon. And in New Britain, a newspaper edition was steeped with the fragrance of apple blossom! Don't ask why.

Yes, Messrs. Bonfils, Pulitzer, Bennett, and other hardheaded gentry of old-school newsdom would find it hard to reconcile the power of the press with Chanel's No. 5.

And an insidious thought occurs to us. How long will it be before this little scene occurs when hubby comes from the office?

Wife (sniffing suspiciously): "John, where have you been? You're reeking with perfume!"

Husband: "Oh, it's nothing, dear. I've just been reading the evening paper."

*Advertisement*

## *Colors Without Names*

The Inter-Society Color Council reports that there are no less than 7,044 different colors classified and listed. But there are only 3,400 words to describe these many varieties of colors. What the other 3,644 are called, the Council doesn't say—perhaps they are referred to as "that color over there." If they asked our Recording Spectrophotometer Laboratory we would have a curve for it.

## *Film Facts for Fans*

IPI's color movie, "Keeping in Touch," continues to be heavily booked—it is still being shown on an average of four times every three days. Have you seen it? It is available to Graphic Arts groups.

A NOSE FOR NEWS
EVENING GAZETTE, PLEASE JIMMY
OK, MR JONES. THERE'S AN AD IN HERE PRINTED WITH PERFUMED INKS!
THIS IS YOUR STOP, CUTIE!
SISSY! CAN YA IMAGINE A MAN USING PERFUME?
HELLO DEAR
YOU'RE A LITTLE LATE, AREN'T YOU, JOHN?
WHERE HAVE YOU BEEN, JOHN. YOU'RE REEKING WITH PERFUME!
OH, THAT'S NOTHING, DEAR, I'VE JUST BEEN READING THE EVENING PAPER

FOR ALL TYPES OF NEWSPAPER INKS, NEWS BLACKS, COMIC COLORS, YES, EVEN PERFUMED INKS, KEEP IN TOUCH WITH

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DIVISION OF INTERCHEMICAL CORPORATION

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# FURNITURE

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*Continuous Strip . . .*

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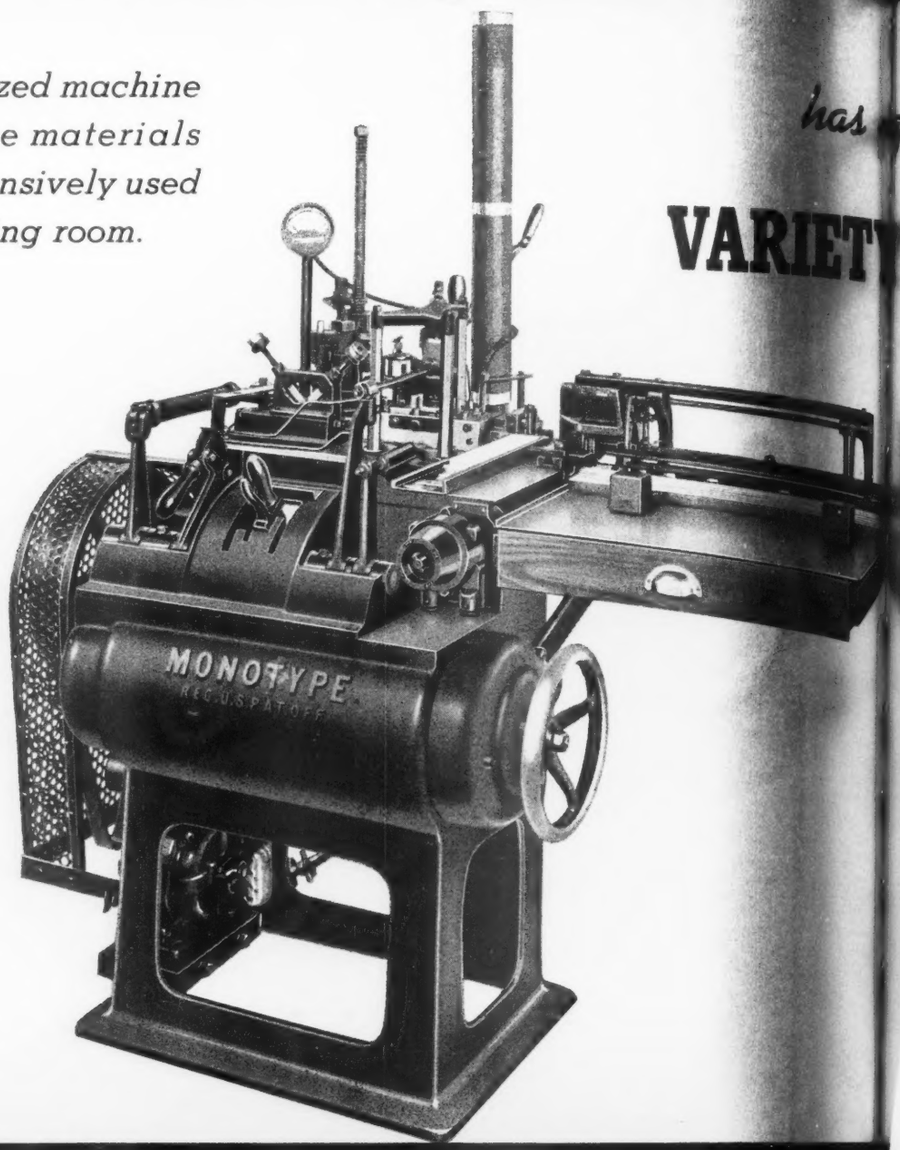
DASHES OF ALL KINDS
DECORATIVE RULE ENDS
LOGOTYPES Cast from Slug Matrices

# The Most Versatile Strip-Material Mac

*A highly specialized machine for making those materials which are so extensively used in every composing room.*

*has*

**VARIETY**



Made in the World

has equal for

ETY PRODUCT

## Single-Column Material

*(Not Made on Other Strip Machines)*

**LEADS and SLUGS**—2 to 12 point, measures up to 15 picas in length.

**STRAIGHT-LINE and WANT-AD RULES**—Many weights of face; 1½ to 6 point sizes; measures up to 15 picas in length.

**CENTERED DASHES**—A variety of designs and weights; sizes from 3 to 14 point; centered on measures up to 15 picas in length.

**SINGLE-PIECE BRACES**—Centered on measures from 4 picas to 15 picas.

**LOGOTYPES**—Cast from slug-machine matrices in sizes from 6 to 18 point, centered on desired measures up to 15 picas in length.

**DECORATIVE END RULES**—A variety of corner designs and rule faces in sizes from 3 to 6 point.

## Continuous-Strip Material

*(Cast in Strips or Cut to Measure)*

**STRAIGHT-LINE RULES**—250 designs and sizes from 1½ to 18 point, inclusive.

**LEADS AND SLUGS**—Either "high" or "low," in all sizes from 1 point to 18 point, inclusive.

**"HIGH" AND "LOW" BASE**—In 12, 18, 24, 30 and 36 point (strips 24 inches long).

**FLUSH-SIDE AND FULL FACE RULES**—Cast flush on one or both sides; 1½ to 12 point body.

**WANT-AD RULES**—Special drive for resisting mat pressure; 1½ and 2 point.

**ORNAMENTAL BORDERS**—200 designs and sizes from 2 to 12 point, inclusive.

**WAVY RULES**—Several weights of rule face; sizes from 2 to 12 point.

**BROACHING RULES**—With special shoulder, several weights and sizes.

**TIE-UP SLUGS**—12 to 36 point, any desired height.

**ELECTROTYPE BEARERS, 12 and 18 Point**—With firm name repeated, to identify foundry forms.

*News.*

## ADVANTAGES

**1** More solid material in all sizes.

**2** Better face on Rules, Borders and Dashes.

**3** Lower temperature at which good material may be made.

**4** Higher speed in casting all sizes and all material.

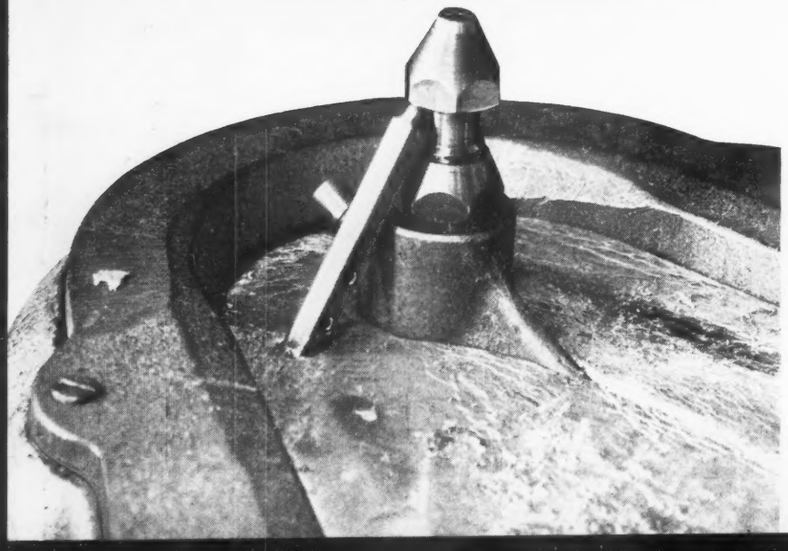
**5** Spitting eliminated and a nozzle shield not needed.

**6** Continuous operation with less attention.

**7** The same setting will "repeat" when recasting any product.

**8** Pot is kept cleaner and drossing is reduced.

**9** Better product and more of it.

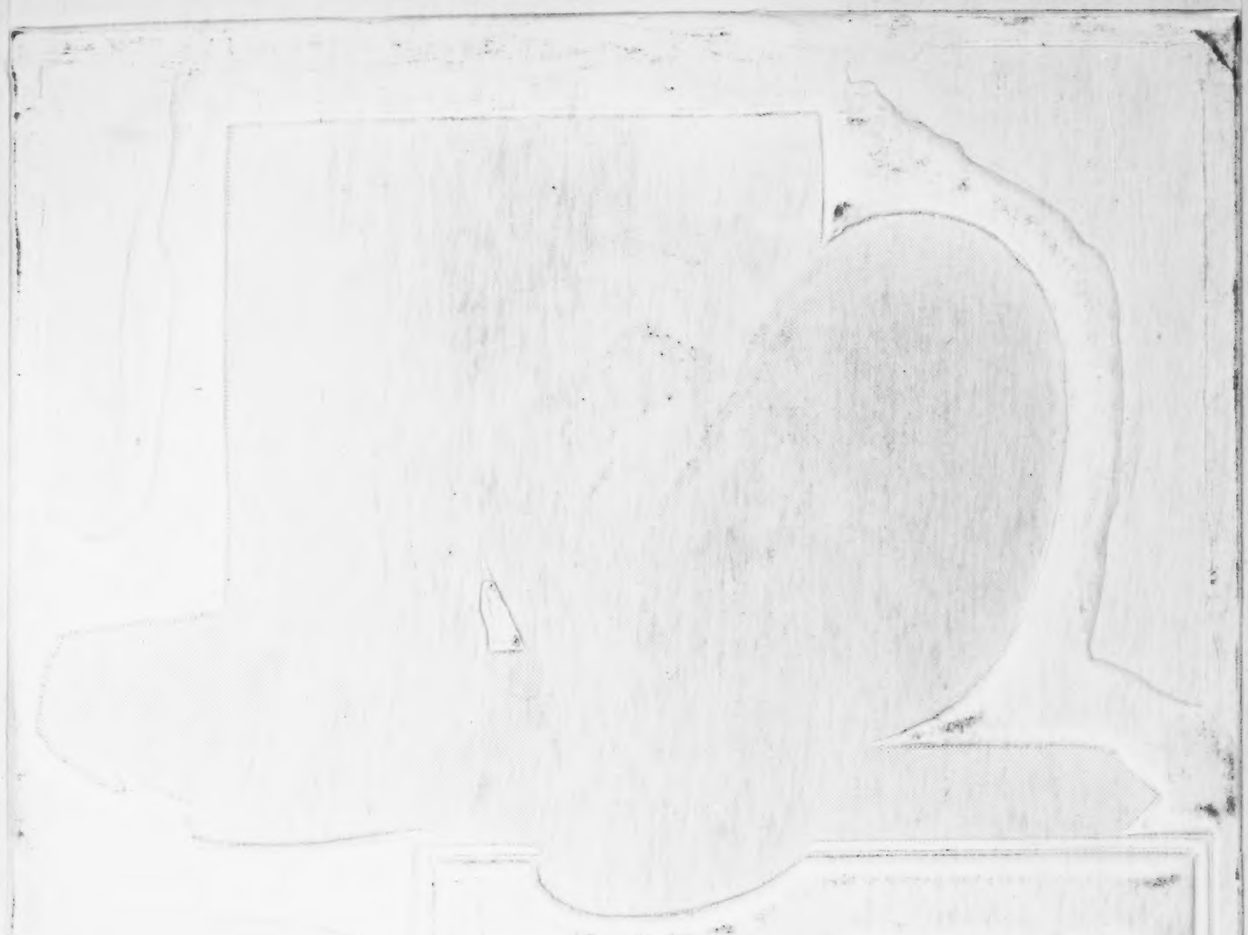


*Lanston*

**MONOTYPE**

**MACHINE COMPANY**

Monotype Bldg., 24th at Locust St., Philadelphia, Pa.



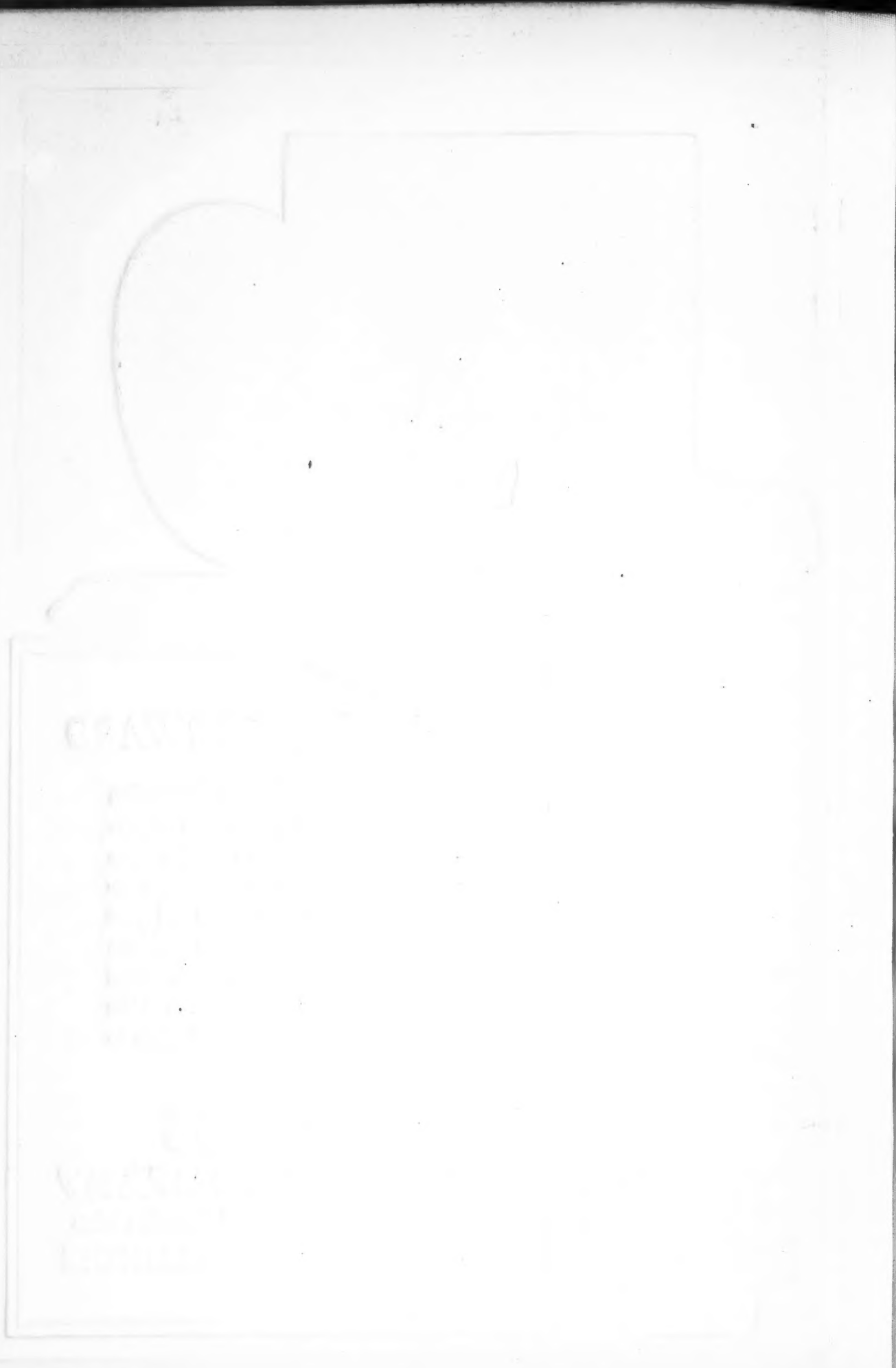
## Another Step FORWARD

The A.N.P.A. Mechanical Convention marks the close of another year of progress and achievement—another step forward in the field of newspaper reproduction. You who attend will want to talk things over—to discuss problems—to swap ideas with the boys. And we believe you'll find our suite at the LEVANT Hotel a mighty good place to do it together.

**BURGESS CELLULOSE COMPANY**

*Manufacturers of Cuprene and Tone-Tex Mats*

FREEPORT ILLINOIS



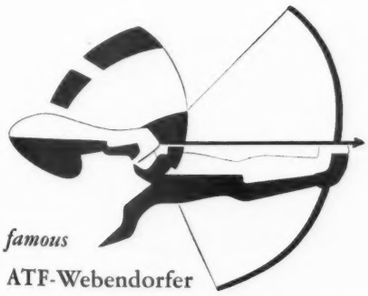
# Letterpress or Offset...

## *Ask* ATF... the only source where you can get *both* complete offset and letterpress equipment... expert advice on *all* your printing needs.

As the world's largest printing supply house we are without prejudice in offering you expert counsel and complete equipment for *either* branch of the graphic arts.

ATF offers the offset printer practical, low-cost equipment that helps his men achieve accuracy and speed... the two most important assets in any offset plant. ATF's *complete* line, from darkroom to pressroom and bindery, costs the least, consistent with quality work.

*Ask* ATF... nowhere else can you obtain *everything* from precision cameras to high-speed sheet or web offset presses in inexpensive matched pieces... as well as bindery equipment and experienced engineering layouts. If you are a letterpress printer thinking of going into offset... Ask ATF. If you are an offset printer thinking of adding letterpress, ask ATF. We can and will help you know the facts. Ask ATF!



*famous*
ATF-Webendorfer

***little chief 20*** ... 14x20
***chief 22*** ... 17x22
***big chief 29*** ... 22x29
*Special web fed offset presses*

Also makers of Type, composing room Saws, famous Kelly presses, Little Giant, non-offset Guns, *precision* Rubber Plate Machine

# American Type Founders

200 ELMORA AVENUE, ELIZABETH, N. J. *Branches and Agents Everywhere*

permitted by the manual saw-elevating mechanism which raises and lowers the saw arbor and permits micrometer setting. A chip drawer is provided. All units are powered with 110 or 220 v., 50 and 60 cy., single phase motors.

**Trade Name Index** which is a new feature of the 1940 Reference Issue, contains 1058 trade names of printing equipment and supplies together with the manufacturers or dealers.

### *Light for Cutter*

A fluorescent (daylight) table light and tape magnifier for the Diamond power paper cutter has been announced by the manufacturers, The Challenge Machinery Co. The new accessory, company states, magnifies the figures on the tape indicator so they may be read easily from a distance of 6 ft. or more, and at the same time illuminates the table with a broad beam of simulated daylight, eliminating the usual "dark spot" at the cutting line.

**View of top section, Challenge's Diamond Power Paper Cutter with fluorescent table light and tape magnifier—figures on tape may be read at a 6-ft. distance.**

The magnifier is large and powerful, it is claimed, and is set at the proper angle for easy reading by a man of average height.

Operating cost of the light is reported to be low—less than one-third the cost of burning a 50 w. bulb, to which the new light is equivalent.

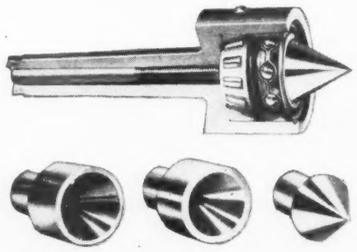
The new Challenge magnifier and light is finished in black crackle, will operate on either 110 v., a. c. or 115 v., d. c., and can be attached to any Diamond power cutter of fairly recent manufacture.

### *58 in. Fluorescent Lamp*

An 85 w. 58-in., type RF, fluorescent lamp producing white light and designed for industrial service has been announced by Westinghouse Lamp Division. The new lamps may be operated on either 105-125 V. or 210-225 V. 60 cy. a. c. circuits in special equipment which provides direct current through the use of a rectifying device. The new white and the blue-white lamps are interchangeable in single and twin fixture units. Color of the light produced by the white lamp is somewhat like that of the daylight Mazda F (fluorescent) lamp. It is suitable for color discrimination uses. Light output is about the same as that of the blue-white unit, rated at 4,250 lumens. Rated average laboratory life is 3000 hours.

### *Ideal Live Center*

Ideal Commutator Dresser Company states its Ideal Live Center is for use on lathes, millers and grinders. The center rotates with the work on precision ball and taper roller bearings. The tool is adaptable to a wide variety of centered and uncentered work on all types of machine tools.



**View of Ideal Live Center for lathe tail stock, millers, grinders and other shop tools. Center rotates with work on ball and taper roller bearings. Inserts removed by knockout screw.**

Three center pieces are available: (1) Male insert for work already centered; (2) Plain female insert for uncentered work such as armatures, drills, etc.; (3) Female insert with three raised lands for uncentered work having flat or burred keyway. Inserts are quickly removed by knockout screw. May be used interchangeably depending upon type of work to be held.

All parts hardened and ground; short overhang is claimed to eliminate all chatter; all cuttings, oil, dirt and chips are kept out by sealed ball bearings.

Made in seven sizes, ranging from 1¾ in. body diam. to 2⅝ in. diam., 60 deg. angle point; Morse taper shank.

### *Type-Line Estimator*

Gale Craig, who is associated with the Cleveland Paper Co., 1640 Superior Ave., Cleveland, has devised a Type-Line Estimator for determining quickly how many lines of type may be set in 6, 8, 10, 12 or 14 pt. sizes of a considerable number of currently popular type faces, from either 10 pt. (Elite) or 12 pt. (Pica) typewritten copy.

The device consists of a cellophane laminated cardboard 4 in. by 11 in. On one edge is a scale indicating without computation the number of characters in a line of pica-size typewriter copy and on the opposite edge of the cardboard is a similar scale for indicating character count in Elite-size typewriter copy.

On the other side of the Type-Line Estimator is a chart containing the names of 68 type faces with character count per pica under 6, 8, 10, 12 and 14 pt. sizes.

Full instructions are given on the scale side of the Estimator.

Copies of the Type-Line Estimator may be obtained from Mr. Craig at 25c each at the address given above.

### *Three-Way Camera Control*

States R. R. Robertson: "The Robertson Combined Diaphragm Control, Timer and Arc Lamp Control for attachment to photo-engravers' cameras is simple to operate." The control consists essentially of an operating device mounted on the camera bed underneath the lens board; a scale attached to the lens barrel in the shape of a sector of a circle indicates the stops; through a lever connection between the operating device and the diaphragm scale, the diaphragm starts to operate automatically when the operator presses a button; simultaneously, the pressing of the button also turns on the arc lamps. Previous to operating the camera, a hand on the dial affixed to the operating device is set to the amount of reduction required. By means of this instrument, the operator need not change diaphragms nor guess at the exposure time.

The diaphragm operates with all screens and for all types of copy.

Further information may be obtained from R. R. Robertson, direct, or in care of *Printing Equipment Engineer*.

### *Ryerson Condensed*

Ryerson Condensed is the name of a new newspaper head letter announced by the Mergenthaler Linotype Company.

"This new face," says C. H. Griffith, Mergenthaler vice-president in charge of typographic development, "is a condensed sans serif with contrasting strokes. Being a condensed face, it naturally affords a good workable unit count in comparatively narrow measures,

**RUN ELEVEN MILES**

**Twenty-seven Men**

Specimen lines of MLCo's 24-pt. Ryerson

and the fact that its strokes vary in weight and it is not a monotone face. The 18, 24, 30 and 36-pt. sizes are available, and other sizes and weights will be made available as required."

The accompanying heads are set in the 24-point size.

### *New Resin Group (PVA)*

A new group of water-soluble vinyl resins, the polyvinyl alcohols, have indicated promising applications in printing and lithographing, says an announcement by the Du Pont Company. The material, designated as PVA, is now out of the laboratory development stage and is available commercially. A technical

# MAKE "Eastern" YOUR SUPPLY HOUSE

## "FLECTO"

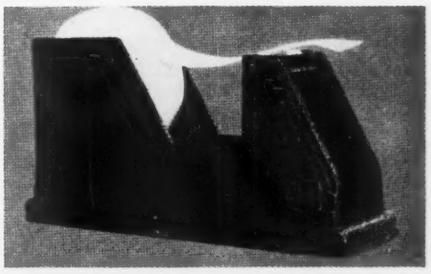
GUMMED BACKING FELT

Recommended by Stereotypers everywhere. Coated with glue that will not slip or leave the matrix under heat. Tears easily. Made in gauges .025, .030 and .035—Sheets 18 in. by 24 in., and gauges .040, .045 and .050—Sheets 18 in. by 22 in. Cut into strips without charge.

Free samples on request

## "PLATE-TAK"

CUT MOUNTING TAPE



No tacks. No cement to squeeze out. Simply lay a strip of this super-thin tape under the cut; press down by hand, and the cut is there to stay. When through, the tape strips off, leaving clean surfaces on both cut and base.

Free samples on request

## ORDER DIRECT—OR

*from any of the following distributors:*

Burgess Cellulose Company . . . . Freeport, Ill.
Certified Dry Mat Corporation . . New York, N. Y.
Coyne & Paddock, Inc. . Long Island City, N. Y.
Flexideal Dry Mat Corporation . New York, N. Y.
R. Hoe & Company, Inc. . . . . New York, N. Y.
Ralph Leber Company . . . . . Seattle, Wash.
M & M Supply Company . . . . . Chicago, Ill.
Morley Button Mfg. Company . Portsmouth, N. H.
George Russell Reed, Jr. . . . San Francisco, Cal.
Russell Products Company . . Philadelphia, Pa.
Scripps-Howard Supply Co. . . New York, N. Y.
Western Newspaper Union . . . All Local Branches
Wood Flong Corporation . . Hoosick Falls, N. Y.

IN CANADA

Bennett Dry Mat, Ltd. . Chambly Canton, Que.
W. E. Booth Company, Ltd.,
Toronto and Montreal, Que.

## "TRU-MOLD"

CORK MOLDING BLANKET

*Truer Type Bowls + Truer, Blacker Solids*

It is scientifically compounded for the perfect balance between density and resiliency, giving full depth type bowls and clean, even solids.

"Place a trial order today."

**SPECIAL**—Tail boards, .054 gauge for curved casting boxes; and .054, .035 and .025 gauge for flat casting boxes.

Newly developed matrix storage boxes, cork lined and moisture proof.

SEND FOR OUR LATEST CATALOG

## EASTERN NEWSPAPER SUPPLY

9603 NORTHERN BLVD. • • • CORONA, N. Y.

bulletin describing properties of the compounds is being distributed.

PVA solutions effectively disperse pigments in printing inks and pastes, serving also to bind the particles firmly to the base materials, according to announcement. The resins have a high film-forming power, suggesting wide use in decalcomanias and in process stencils. They may be used for pigmented inks and writing inks as well as printing pastes. Their neutral character helps to stabilize the preparations in which they are used.

As a photo-sensitive coating on zinc plates employed in lithographic printing, PVA was shown to produce sharper images than those possible with other films. The coating is applied directly to the plate, having been first photo-sensitized by the addition of dichromates. Special coating compositions for this purpose are now available.

The resins are manufactured in a number of grades, since proper selection is necessary to meet individual requirements. In general, polyvinyl alcohols are white to creamy-white powders, odorless and tasteless. They may be molded, extruded or formed into films from water solution. No toxic or inflammable solvents need be employed, and if desirable the film can be made quite resistant to water. They are not affected by oils, greases, fats, hydrocarbons or ordinary organic solvents.

### *Fostoria Viewing Table*

Fostoria Pressed Steel Corporation has developed a steel Viewing Table for use in assembling or inspecting negatives, page makeup, checking registration, and other uses in the offset and letterpress

**Fostoria Viewing Table built from steel has 31 in. by 36 in. flashed opal glass top, illuminated by diffused light from two fluorescent tubes underneath the glass.**

fields. The table measures 32 in. by 48 in. The front legs are 40 in. high and the back legs 44½ in. high. The working surface consists of a flashed opal glass panel 31 in. by 36 in., this panel being illuminated by two 30 w., 36 in. fluorescent daylight tubes. This arrangement of the tubes provides an even light diffused by the flashed opal glass over the entire working surface. There are no extremely bright spots on the table and little if any heat from the lamps.

Additional features include a flexible arm lighting unit for the table top, a tray at the front for tools and instruments. The frame is provided with an all-over wrinkle black finish. All joints are welded to prevent objectionable swaying.

The Viewing Table is furnished in wired form ready for plugging into lighting circuit. Fluorescent tubes, however, are not included.

**Trade Name Index** *for Mechanical Executives—Use the new Trade Name index (1058 items) published on pages 157-169, 1940 P-Double-E Reference Number.*

### *Spartan Heavy With Medium*

C. H. Griffith, Mergenthaler vice president in charge of typographic development, announces that Spartan Heavy with Spartan Medium is now available in 6, 8, 10, 12, 14, 18 and 24 point. "This recently completed series," says Mr. Griffith, "complements series of Spartan Medium with Italic, Spartan Heavy with Italic, Spartan Black with

**How Many 1, 2,**
How Many 1, 2,

Italic, and Spartan Light with Spartan Medium for newspapers, book and commercial printers, and advertisers. Spartan Duplicate is also for use by designers of food-store advertising."

The accompanying lines present brief showings of the 24-point size of Spartan Heavy with Spartan Medium.

### *Baskerville Bold With Italic*

Baskerville Bold with Italic is a new Linotype face just announced by C. H. Griffith, Mergenthaler vice-president in charge of typographic development. The series is available in 7, 8, 9, 10, 11, 12 and 14 point sizes, and in the same range in combination with Baskerville Roman.

**HERE is a showing of the 9-point size of the new Linotype Baskerville Bold *with Italic. MODERN* man *cannot be served by a tool that is just good enough or a little better than pretty good. The good tool must* 123**

The accompanying lines present a brief showing of the 9-point size of Baskerville Bold with Italic.

## *Monotype Earnings*

President Harvey D. Best of the Lanston Monotype Machine Company, in his annual report to the stockholders, states that the net consolidated earnings of the parent company and its subsidiaries, after taxes, plant depreciation, patent amortization, inventory adjustments and the setting up of reserves to cover exchange losses, etc., were $44,967.74.

In the report, Mr. Best discusses the loss of export business due to the European war and the measures which have been taken to offset those conditions.

He also reports that the Lanston Monotype Machine Company's Engineering Department during the year completed building model machines of entirely new design of Monotype Composing-Casting Machine and Keyboard. The models having had comprehensive operating tests, the Company is going ahead with active tool designing and tool making preparatory to factory production. "These machines," states the President, "will not replace present standard models, but do afford for a large percentage of typesetting not only speed of production, but also efficiency and flexibility far beyond the present models."

### *To Larger Quarters*

The Boston branch office of Brandtjen & Kluge, Inc., has been recently moved to the Western Union Bldg. at 115 High Street. Several presses are set up in an operating exhibit in the display room. Instruction in the operation of Kluge equipment will be given.

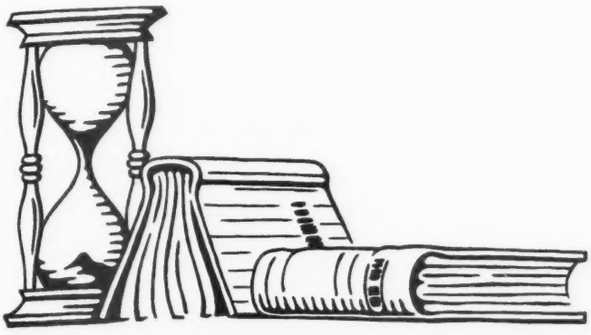
### *Outstanding Program Booklet*

R. Randolph Karch, Technical Supervisor, Department of Publishing and Printing, Rochester Athenaeum and Mechanics Institute, who is serving as local chairman for the 19th annual conference on printing education of the National Graphic Arts Education Guild, to be held in Rochester, N. Y., on June 30 to July 3, has sent us a copy of the agenda (program) for that event.

The booklet is approx. 5 in. by 7 in. size, 42 pages and cover. Bound in blue Wire-O to match the cover stock. The booklet was printed at the Institute on Hamilton Victoria Text and cover papers. Besides the excellent typography the scheme for indexing the pages devoted to the four convention days is novel. All of the index leaves overhang the text pages. Two of the index pages, however, are cut at an angle of about 6 deg. and all four are in different pastel colors.

# After 500 Years

## SINGLE TYPES ARE STILL BEST



*Although five hundred years have elapsed since Gutenberg first composed single types in his invention of printing, no other method of typesetting has been developed which provides an equally good surface for printing.*

¶ Single-type composition has that flexibility which finds its expression in the proper fitting of characters and greater convenience in allowing for cuts, initials, etc. It gives unequalled facility in letter-spacing and word-spacing.

¶ Single types "compose" better and give a better impression on paper, make better electrotypes, and reproduce more faithfully when photographed for printing by offset or gravure. Single-type composition costs less to print.

¶ For text composition Monotype Machine Typesetting has all the superior features inherent in single types, plus the added advantage of low cost of production. Monotype single types for display use are always fresh-cast for each job, and are available in practically unlimited supply for fast and economical typesetting. *Write for the "Monotype 3-Way System" booklet.*

**LANSTON MONOTYPE MACHINE COMPANY**

**MONOTYPE BUILDING, TWENTY-FOURTH AND LOCUST STREETS, PHILADELPHIA, PENNA.**

Composed in Monotype Baskerville with Goudy Text and Baskerville Bold for Display

# EXECUTIVE ¶s

M. G. Broad, who for many years was associated with the mechanical departments of the *Nassau Daily Review*, Rockville Center, Long Island, N. Y., is now located in India. Mr. Broad is stereotype-pressroom executive in charge of *The Hindu*, India's second largest newspaper, which has a daily circulation of 40,000 copies. The paper is piblished in Madras.

Lester L. Whitman, Mechanical Superintendent of the Duplex Service Co., Columbus, O., passed away suddenly in March. At one time he was connected with Mergenthaler Linotype Co. and Miller Printing Machinery Co.

The Eastern Lithographers Association officially announces the appointment of Robert P. Inglis as executive secretary. The new address of the Association is 110 East 42nd Street, New York, N. Y., opposite the Grand Central Terminal.

## Appointed Type Designer

President Neal Dow Becker announces the appointment of George F. Trenholm, type designer and artist of Boston, to the office of Type Designer and Type Counsel to Intertype Corporation.

As soon as George could hold a pencil, he started drawing and lettering. His art work on the high school paper in Somerville, (Mass.) was such as to secure for him his first position.

Mr. Trenholm has always worked in Boston where he has had a wide practical experience in the various branches of the graphic arts. His studies with Charles E. Heil, the Boston painter, Vojetch Preissig at the Wentworth Institute, and at the Massachusetts Normal Art School gave him a knowledge of design.

The "G.F.T." on many examples of book, catalog, magazine covers, and advertising designs indicate that Mr. Trenholm's reputation as a designer has received a wide recognition. His knowledge of type design was first brought into use in 1927 when he designed Trenholm Old Style, Trenholm Cursive, and Trenholm Bold for Barnhart Brothers & Spindler, and a variety of decorative ornaments and borders for the same company. He also designed the alphabet of old style letters used in the U. T. A. apprenticeship training course, and Georgian Cursive for the Machine Composition Company of Boston.

**George F. Trenholm, Intertype's new Counselor in Type Design.**

Among the Intertype faces designed by Mr. Trenholm are Egmont Initials and Nova Script. Other faces have now been designed and are in process of manufacture.

In 1935 Mr. Trenholm won first award (book type classification) in the contest sponsored by the Advertising Typographers of America. He is a past president of the Boston Society of Printers and a member of the Boston Club of Printing House Craftsmen.

Other members of the typographic department of Intertype Corporation include Howard N. King, Typographic Counselor, and B. Walter Radcliffe, Director of Typography.

Mr. King has been associated with Intertype for the past five years. He is personal representative of A. T. Mann, Jr., Vice President and Director of Sales, and has made many addresses before meetings of Craftsmen's Clubs, publishers, advertising clubs and educational institutions.

Mr. Radcliffe, formerly of Macon, Ga., has been director of typography and advertising manager of Intertype Corporation for the past fifteen years. He is also manager of the specimen printing division and is editor in chief of *Who's Who in the Composing Room* and *Who's Who in Intertype*.

### *Appointed Superintendent*

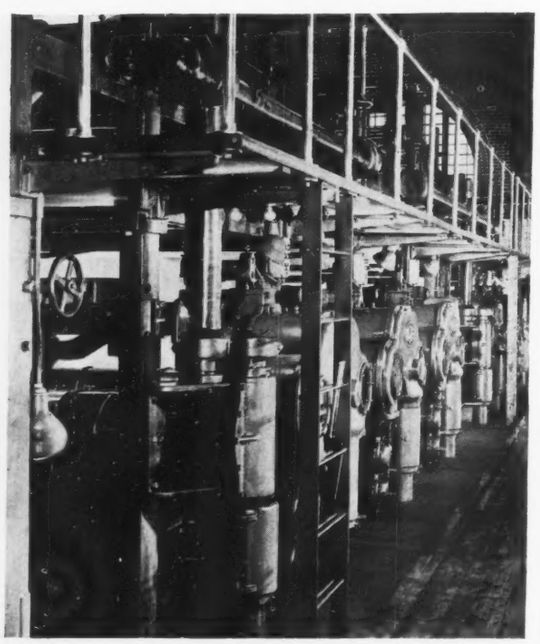
Frank J. Frisch, new mechanical superintendent of the Plainfield (N.J.) *Courier-News*, has had a wide and varied experience in the mechanical end of newspaper work.

Born in Rochester, N. Y., January 21, 1895, he attended Rochester schools, entering newspaper work in 1911 with the Rochester *Herald*. He remained in the employ of that paper until 1921 when he spent a year in a commercial job plant. He then returned to his first love—newspaper work—with the Rochester *Journal* where he served as assistant foreman and then as foreman of the composing room.

**"I'm no relation to the famous ballplayer," said Frank J. Frisch, "but I'd like to meet him."**

He has been with the Rochester *Times-Union* for the past three years, where he served as foreman; and then with the Rochester *Democrat & Chronicle*, coming to Plainfield from that paper.

During World War days, Frisch served one year with the Coast Artillery, being stationed at Fort Hancock at Sandy Hook. New Jersey.



## Post-Standard Orders New Hoe Press

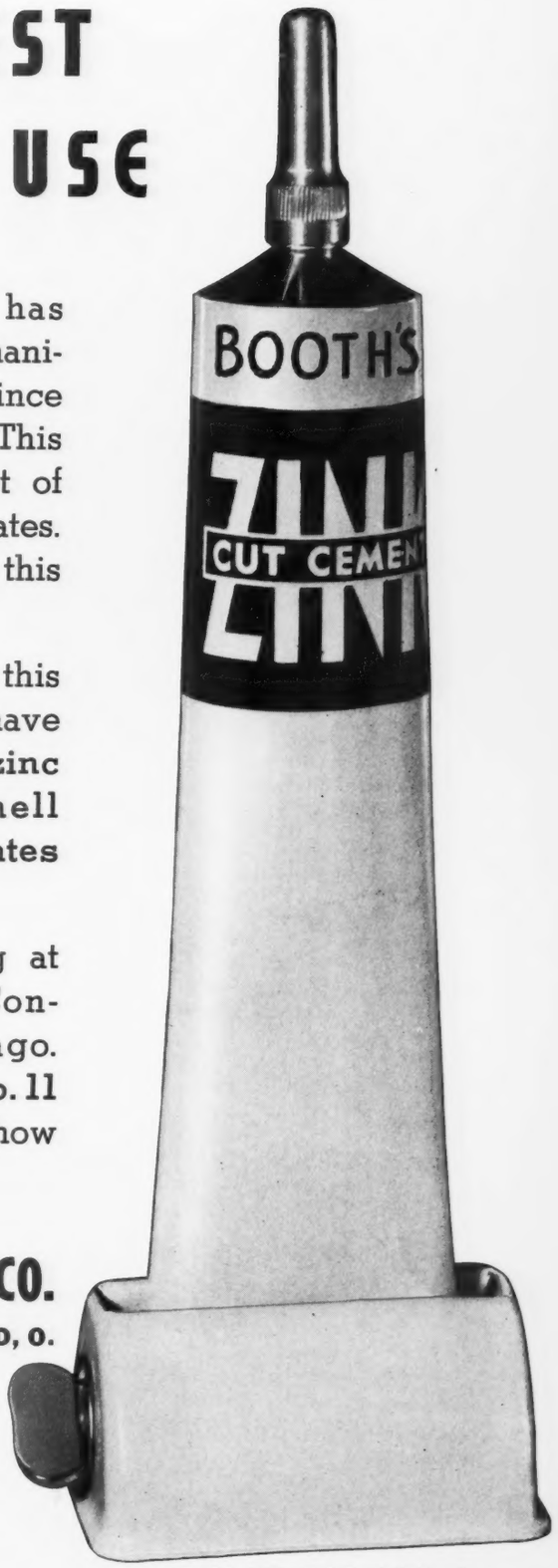
Provisions for the printing of daily "run of paper" color from one to four colors through such devices as an extra color cylinder, reversible cylinder arrangements and duo ink rails are included in a new Hoe newspaper printing press to be installed in the near future by the *Post-Standard*, Syracuse (N. Y.). The new press will consist of six Arched-Type Super-Production Units, equipped with two Hoe Super-Production Double Former Single Delivery Folders. This new press with anti-friction bearings throughout, will be erected in the new and modern home of the *Post-Standard* on an extra heavy integrally built Hoe cast-iron substructure.

# *The* ACID TEST
# 6 YEARS *of* USE

Booth's Zink Cut Cement has demonstrated its value to Mechanical and Production Executives since its introduction six years ago. This is proved by the growing list of users throughout the United States. Our first customer is still using this cement.

If you don't already know about this fine product, we would like to have you try a tube at 75c. **Fastens zinc and copper cuts, stereo shell casts, electros and plastic plates to wood or metal base.**

By the way, we are exhibiting at the A. N. P. A. Mechanical Conference, Hotel Drake, Chicago. While there, drop in at **Booth No. 11** and we'll demonstrate to you how simple it is to use.




## THE E. A. BOOTH RUBBER CO.

**364 ROCKEFELLER BLDG. CLEVELAND, O.**

*Foreign Distributors*

SEARS, LTD.
Toronto, Montreal, Winnipeg, Vancouver, Canada

JUNGER & JUNGER
Goteborg, Sweden

Copyright 1936 — E. A. Booth Rubber Co.

**ZINK CUT CEMENT PRICES**
**in the United States: 75c per large tube; $6.00 per doz. tubes; $5.00 per doz. tubes in gross lots**

# E PLURIBUS UNUM *or Here I Come...*

## *A Windy Bill Story*

**By L. H. HOUCK**

TO USE his own words, Windy Bill rolled into Garden City with the "roar of wheels and the smell of manure."

He had been called to Garden City from his bench on the Wildwood *Daily Record* to repair a down composing machine, and since Mrs. Windy Bill wanted the car for personal use he had to take the train. So Windy relaxed into a seat in the smoker of the Katy Unlimited Mixed Local and waited for the porter to call Garden City.

His orders read: "Garden City *Index*. Inspect and repair machine installed three months ago. Owner says machine down."

The negro porter was shuffling into the coach. "Ge-ar-den Cit-ee." He bawled loudly and then out of the corner of his mouth, "Don't forget your packages."

Windy Bill pulled his heavy tool box out from between seats. On the station platform he sniffed the air.

"My nose knows." He turned his olfactory organ to the breeze again. He mentally located the stockpens and eliminated them with the same sniff.

Now he had it. He sniffed printer's ink. Nose in air, he turned the corner. There it was across the street. "Garden City Index. Job Printing. Stock Catalogs a Specialty."

He headed for the front door. "Well, as I always say," he said to himself "E Pluribus Unum or here I come."

Through the empty front office and into the composing room he went. Over on the other side of the room was the machine. Her light was out. The belt stretching from her back to a lineshaft on the back wall was strangely still. A gasoline burner bubbled under her metal pot with a merry band of blue.

A man who had been feeding hand bills into the hungry maw of a jobber, cut the juice on the gasoline engine and came forward.

"I'm Charles Reardon, the publisher," he said. "You're Smith, from the company?"

Windy Bill answered, "E Pluribus Unum or that's correct. What's the trouble?"

"We're very much disappointed in our machine," the publisher said. "We've been down several days now."

The publisher made a wry face. "It ran very well at first, the erector gave me some instructions and I took the job of setting the type and keeping the machine up until I could get a regular operator."

"Have you ever had any experience running a linotype machine before?" Windy Bill had put his tool box on the floor and was getting out his work clothes.

"No, but since the machine is comparatively simple I was sure I could run it. I got the type for the paper up for almost three months, with a little trouble here and there, and then it suddenly refused to make a slug of any kind. Naturally it is a defect of some kind for which the company is solely responsible and we expect them to make it good."

"When was the plunger cleaned last?" Windy Bill asked.

"The plunger?" The publisher's face registered blank - - - as blank as a fresh sheet of 17x22 bond.

"Where is the plunger?" he asked.

"Here, this is the plunger - - - this thing here," said Windy Bill, shaking the rod.

"Well," the publisher replied, "If there is anything wrong with that thing you can't put the blame on me for I never touched the blamed thing."

"Who does clean it then?" Windy Bill asked the question and followed up with "And when was it cleaned last?"

"Mister," the publisher smiled. "You're barking up the wrong tree. Nobody around here has cleaned it or even touched it. If it's not working then it's a defective part and covered by the guarantee."

Understanding finally penetrated through Windy Bill's thick skull and hit a soft spot inside.

"Do you mean," he said, as though he could not believe what his own cumbersome ears had heard, "that since this machine was installed three or four months ago, the plunger has *never* been taken from the well and cleaned?"

"Yes sir," the publisher answered, "and the factory will have to make it

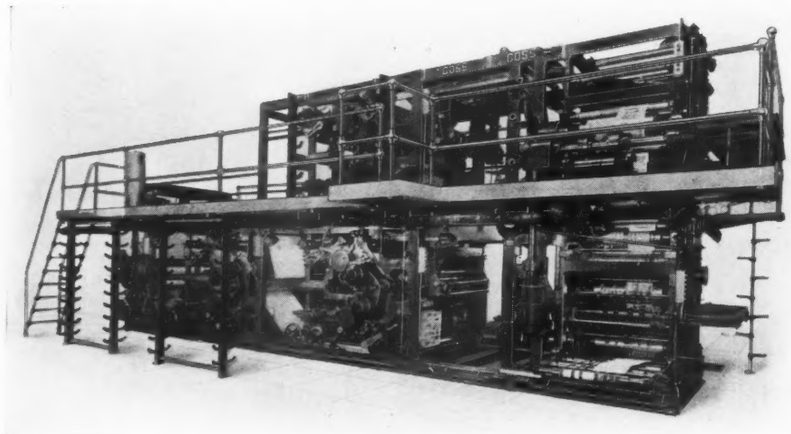
## *Order Three Goss Magazine Presses*

Kable Brothers, Mt. Morris, Ill., and C. T. Dearing Printing Company, Louisville, Ky., recently purchased Goss High-Speed Magazine Presses.

Kable Brothers' press will be a 32-page, single-web, high speed, two-color magazine press, consisting of two double-color printing couples, with spiral grooved plate cylinders, for printing black and one color. The equipment will also include oil off-set arrangements in a movable carriage and a three-arm reel with full-speed paster. This press will have a high speed, right angle combination pin point and collecting jaw magazine folder with air angle bars, two pages wide, with a double delivery—one toward the operating side, and the other toward the drive side. Goss patented laminated grippers and jaws will be used. Provision will be made for adding another deck in the future to give the press a 64-page, two-color capacity. Offen dryers will be used with this press, and it will be supplied with water-cooled drums. The gears of the horizontal main drive shaft, vertical press drive shaft, cylinder drive, ink drive, and folder drive shaft will be housed and run in oil. The press is stated to have a running speed of 20,000 printing cy. rev. per hr.

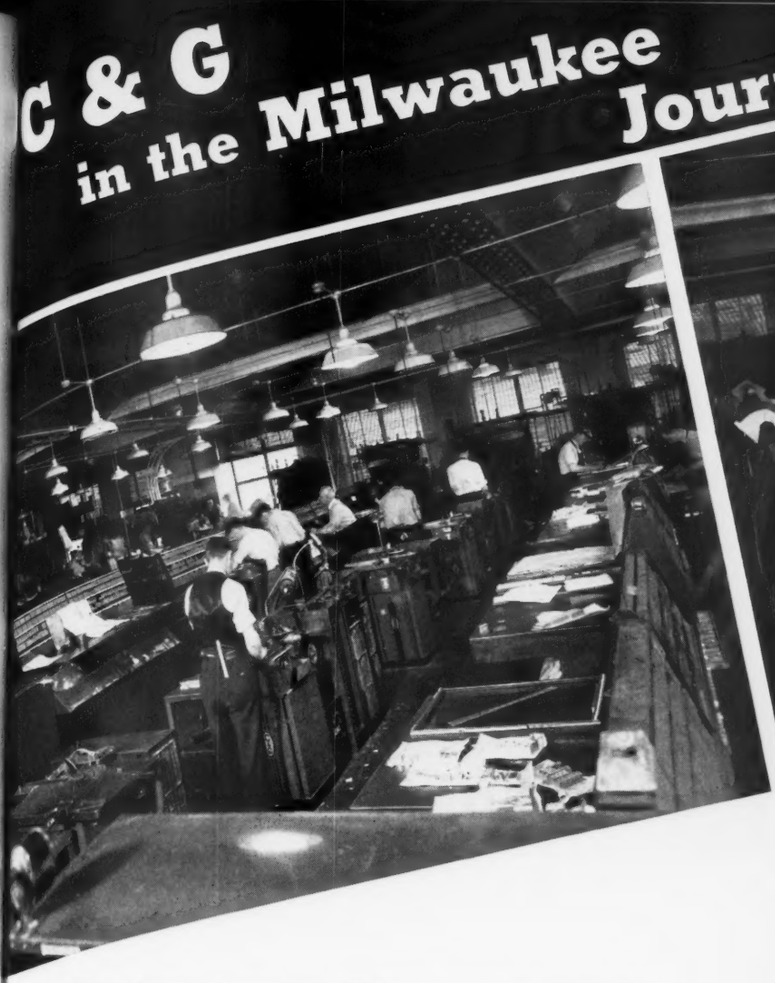
C. T. Dearing Printing Company is getting two new magazine presses—a 32-page, single-web, two-color press and a 64-page, two-web, two-color press.

The 32-page press will consist of two double-color printing couples with spiral grooved plate cylinders, and the 64-page press will have four printing couples with spiral grooved plate cylinders. Both presses will have a two-page-wide, right angle folder with double delivery and Goss patented laminated grippers and jaws. These new presses will be equipped with Goss three-arm reels and tensions with full speed pasters, oil offsets, and air angle bars. They will be built for use with Selas dryers, and water-cooled drums will be provided. Double ductor ink arrangements with pre-ink distribution will be furnished.



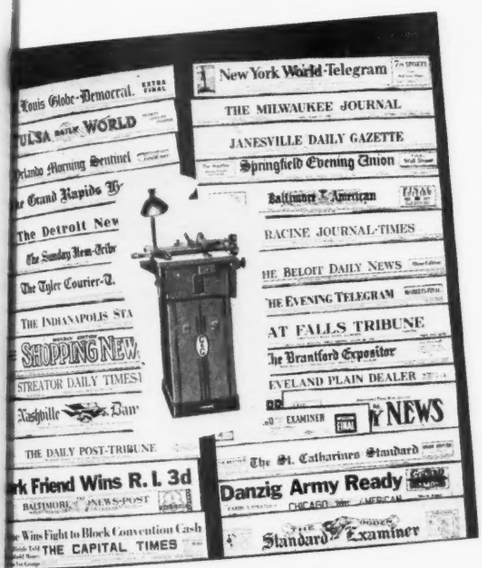
**Goss 64-page magazine printing press recently ordered by C. T. Dearing Printing Company.**

# C & G in the Milwaukee Journal



The above shows an efficient arrangement of C&G 3-A Saw Trimmers in the *Milwaukee Journal* Ad Room. To produce over 1½ million lines of advertising a month the Journal uses 12 C&G 3-A Saw Trimmers, 2 C&G Angle Gauges and 1 C&G Sawliner, which is evidence that the Journal believes that *"saw trimmers are cheaper than waiting time."*

The Foreman of this plant has to answer for "high composing room costs." His Boss is paying for a new saw trimmer every three months with lost time, and the waste goes on.




We invite you to investigate the many outstanding features of the C&G 3-A Saw Trimmer and receive a personal demonstration at Booths 16 and 17, A.N.P.A. Mechanical Conference, or write for descriptive literature.

*C&G Saw Trimmers increase production and reduce costs*

**MILWAUKEE SAW TRIMMER CORPORATION**

612 EAST CLYBOURN STREET

MILWAUKEE, WISCONSIN

good before I make the next payment."

Windy Bill didn't feel like talking for a little while, but when he finally returned to the earth-bound sphere, he started dipping out the metal, sent a boy for some tallow and prepared for a long siege with the dross and dirt.

"If we ever get the plunger out," he told the publisher, "remember this plunger must be cleaned, taken from the well every day and cleaned with this wire brush. Then the well must be cleaned and the holes in either side punched out."

"And if you don't get it out?" The publisher wasn't smiling now.

"If we don't get it out, it might be a good idea for you to start out with a bunch of statements and round up about a hundred bucks before you come back."

When the publisher had left and Windy was alone with his pot, he was heard to say: "E Pluribus Unum — the plunger is stuck and so am I."

## *Lilac Odor in R. O. P. Color Advertisement*

A FULL page r.o.p perfumed color advertisement was printed in the Wednesday, April 24 issue of the Cleveland *News*. The run consisted of 160,000 papers. The green color ink carried lilac odor. The advertisement was printed for the City Ice & Fuel Co. and the illustration and key-line "As Fresh as a Spring Garden" was emphasized naturally by the addition of the scent of spring flowers. The enterprising advertiser chose lilac, and with the enthusiastic co-operation of the ink manufacturer the *News* produced an edition that was the printing sensation of the day in Cleveland. Successful from every point of view.

Mechanical Superintendent Wm. V. Cowgill states that he believes this is the first perfumed color ink advertisement to be printed in a regular daily edition of a newspaper in this section of the country.

Mr. Cowgill reports that while this is the first experience the *News* executive personnel has had with perfumed inks, there isn't anything particularly difficult about using them even though the handling of perfumed inks intended for r.o.p. color at higher speeds is different than when Sunday color is being run. The mixing of the essential perfume essence with the ink is the inkmaker's problem inasmuch as the incorporation of these oils with printing inks upsets the regular formula and it is necessary to compensate to provide an ink of the proper working consistency.

Lilac seems to be less fugitive than some of the other odors because two-week-old copies of the *News* still carry the perfume pronouncedly.

In the advertisement, 82¼ lbs. of ink were ordered for the 160,000 run, of which 70¼ lbs. were used. The ink and essential lilac oil were mixed in the proportion of 54¼ lbs. of green ink to 28 lbs. of the essence. In mixing these oils into inks, the percentage runs from 15% to 33%, according to the aroma required. Less of the higher cost oils is required, which naturally leaves the inference that a greater quantity of lower cost oils is required for the same purpose.

# PERFUMED INK PRINTING

### *not a complicated procedure — Interval from printing to receipt of work by reader important in selection of odor*

**By STAFF WRITER**

THE current activity throughout the country for printing newspaper advertisements, usually in color, with perfumed inks has created considerable interest upon the part of production and mechanical executives respecting the technique involved. There isn't anything complicated about doing this kind of printing. There are, however, a few points which will be pertinent to mention for the benefit of those who have not had experience.

The present vogue in the use of perfumed inks seems to have had its impetus with the printing of an advertisement last November by the Indianapolis *Star* for a department store. Since that time perfumed ink advertisements have appeared in newspapers published in many sections of the country. Some of these were outstanding examples of color printing in addition to carrying various odors suitable to the subject matter of the advertisement.

Perfumed inks have and are being made for newspapers, direct mail advertising leaflets, package wrappers, etc. The perfume base may be added to the ink in the factory or later on just before use in the customer's plant. The former method permits better control and mixture of the amount of perfume which is to be added and also permits the manufacturer to compensate for any changes in the body of the ink which may be caused by adding the perfume base.

Each perfumed ink is an individual problem. The most important factors are (1) the kind of odor, and (2) what time interval will elapse between the printing and the time the reader will receive the finished product.

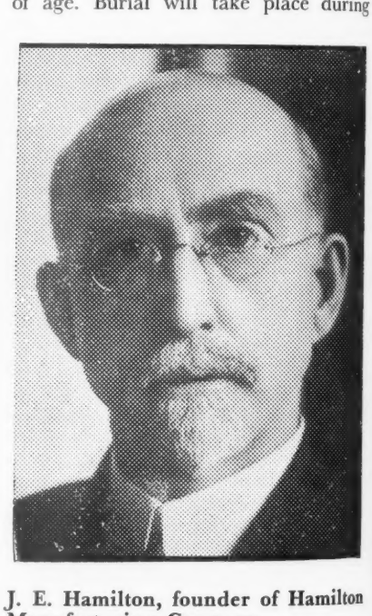
Most perfumes evaporate rapidly, or at best, parts evaporate leaving a residue of different odor. Providing perfumed inks for newspaper printing is the simplest problem, because the odor need not last more than 12 hours from the time of printing and the absorbent paper tends to hold the odor.

Printing inks containing spearmint, lilac and other similar odors can be produced without difficulty. In considering inks the odors of which must last for many days, it is usually necessary for the customer to select one—or a combination—from the relatively non-volatile odors such as myrrh, musk, labdanum, etc.

The extra cost of perfumed over the same unperfumed ink varies widely, but it may be presumed that an average figure is 20c per pound. This added cost might run as low as 5c or higher that $5 per pound of ink depending upon the odor required and the amount of perfume base needed.

### *Hamilton Passes*

J. E. Hamilton, founder of the Hamilton Manufacturing Company, Two Rivers, Wis., passed away in his rooms at the Hotel Vista del Arroyo, Pasadena, Calif., Tuesday, May 7. He was 88 years of age. Burial will take place during the summer in Two Rivers. He was a member of the Congregational church and a 32 deg. Mason. He had not been active in management affairs of the Hamilton Manufacturing Company since 1919, but had spent most of his time in California.



**J. E. Hamilton, founder of Hamilton Manufacturing Company.**

# Keeping ipi in Touch

PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION • JUNE, 1940

## Chemical Ferris Wheel Gives Evaporation Rates

The last few years have brought great advances in printing inks, and many of these advantages have been concerned with drying time. For instance, the quick-drying Vaporin inks, Lithox for lithography, Holdfast, new pigmented aniline-type inks, and other recent developments have made significant contributions to the Graphic Arts by virtue of their faster drying properties.

Evaporation rate of ink solvents has a definite relationship to ink drying time. So the precise measurement of this characteristic is an important operation in The Research Laboratories of Interchemical Corporation, parent company for IPI.

The "Ferris wheel" apparatus shown here is ingenious. It determines simultaneously the evaporation rates for several materials. Like much of the Laboratories' equipment, it was specially designed—designed to do a job which contributes to finer printing.

### *Uncle Sam Likes His Own Advertising*

*While some departments of the Government seem to be giving advertising quite a kicking around, other departments are finding it to be useful as a method for stimulating sales. The Treasury Department's savings bond division reports that every promotional dollar expended thus far has produced $1,000 in bond business. Not a bad return.*

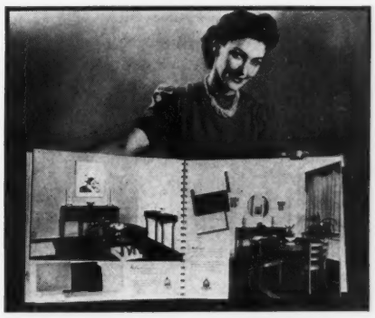
# STYLE GUIDE CALLED PRINT JOB OF DECADE

"Outstanding in the Graphic Arts as the job of this decade." That phrase was quoted in a current magazine as descriptive of the new Sherwin-Williams "Paint and Color Style Guide," an elaborate book containing 236 photographs of home exteriors and interiors.

A first edition of 25,000 copies was produced, at a cost estimated at somewhat more than $10 a copy. The "Style Guide's" reception has been so encouraging that another edition is already on the presses of the book's printers, Davis, Delaney & Harris, New York City.

**Distinguished List Using IPI Inks**

Like the "Treasury of Art Masterpieces," the Art Directors' Yearbook, "U. S. Camera Annual," the new Kodachrome book, and other



fine volumes, the Sherwin-Williams "Style Guide" was printed with IPI inks. When printers want to *know* the ink will be right, they call on IPI.

## Perfumed Ink May Prove to Be Embarrassing

Shades of Horace Greeley! The printer's devil now smells like a geranium, and a rich lush odor of crushed roses pervades the pressroom. For the boys are mixing up the latest batch of delicately scented inks to print an advertisement for a new kind of perfume.

To the old giants of journalism, the pungent smell of printer's ink was the very elixir of life. But now, what a difference there can be in that smell! From Los Angeles to Connecticut, with plenty of stops in between, come reports on the growing use of various types of perfumed and flavored inks.

In St. Louis, a newspaper advertisement wafted the gentle aroma of Potpourri perfume towards the reader. In Chicago, inks used to print an advertisement for chewing gum were flavored with cinnamon. And in New Britain, a newspaper edition was steeped with the fragrance of apple blossom! Don't ask why.

Yes, Messrs. Bonfils, Pulitzer, Bennett, and other hardheaded gentry of old-school newsdom would find it hard to reconcile the power of the press with Chanel's No. 5.

And an insidious thought occurs to us. How long will it be before this little scene occurs when hubby comes from the office?

Wife (sniffing suspiciously): "John, where have you been? You're reeking with perfume!"

Husband: "Oh, it's nothing, dear. I've just been reading the evening paper."

*Advertisement*

### *Colors Without Names*

The Inter-Society Color Council reports that there are no less than 7,044 different colors classified and listed. But there are only 3,400 words to describe these many varieties of colors. What the other 3,644 are called, the Council doesn't say—perhaps they are referred to as "that color over there." If they asked our Recording Spectrophotometer Laboratory we would have a curve for it.

### *Film Facts for Fans*

IPI's color movie, "Keeping in Touch," continues to be heavily booked—it is still being shown on an average of four times every three days. Have you seen it? It is available to Graphic Arts groups.

# *Untoned Ink* consumption for newspaper printing is increasing—Ink manufacturers have kept pace with problems brought about by faster presses

By WILLIAM T. DIEFENBACH*

**Chief Research Chemist, J. M. Huber, Inc., New York. Abstract of paper read before the Pennsylvania Newspaper Publishers Mechanical Conference, Harrisburg, Pa., April, 1940.*

TWENTY-FIVE years ago our news inks were relatively simple. They were usually merely carbon black ground out in mineral oils. Practically all the ink was untoned. The oils used had a slight but definite brownish cast. In the absence of toner, the oil bleed from printed matter was, of course, slightly brownish. This oil halo around printed letters and halftone dots, microscopic though it was, and even though it could not be recognized by the naked eye, returned a brownish color to the eye. This was increased by the brownish undertone of the carbon black. The result was a muddy brownish appearance to the paper in general.

Newspapers in England before the World War had already gotten away from straight carbon inks and there was a big demand for inks with toner included.

At least two of the largest American ink manufacturers had news ink plants in England, one being J. M. Huber, Inc.

In the earlier nineteen twenties the price of news ink was very low. It would have been very difficult to introduce the much more expensive fully blued or toned black inks to the American market. But at this time, however, several factors arose to stimulate a demand for these more highly priced inks. Among these we might mention two.

The Ayer Award was instituted with prizes for special excellence in appearance of the printed newspaper. Then the tabloid appeared, which demanded the best in paper and ink to make possible a pleasing reproduction in its greatly increased number of halftone cuts. In America, the tabloid was new and it did its best to make its very appearance an appeal to acceptance. In the matter of ink it copied its English predecessors and started out with toned ink.

After the first Ayer Awards were won by papers using toned inks, there was a very strong trend to this type of ink in America. The demand was for rather strongly toned news inks which showed bluish black in the print and often almost a blue. This demand increased to a point, where, in 1935, over 90% of news inks made for consumption in the eastern United States were toned. The West followed the trend somewhat but not as greatly as the East and as its peak took about 70% toned and 30% untoned ink.

There was, however, a difference in opinion and some papers still wanted black without bluishness in the print. Without toner cuts showed quite brown, due to the bleed of the brownish oils from the printed dots. This put the then existent untoned ink at a disadvantage, and the papers asked for improvement. The ink manufacturers sought to remedy this and, working in conjunction with the oil companies, introduced cleaner and less colored oils into their inks. With much less pronounced and the print lost much of its brownishness and appeared more black. This was distinct improvement in news inks, and brought untoned black inks to a new high standard.

During this period of development of finer black news inks another big development was going on. This was in the faster printing presses which were being developed. Today we have presses capable of running at almost unbelievable speeds.

It would be impossible to print on these presses with inks designed for

POSITIVE, PRECISE, HEAT CONTROL
for the Printing Industry

The Fenwal "High Temperature" Thermoswitch, completely adjustable over a 300° - 1100° F. range, with practically no Thermal lag, with electrical rating up to 25 Amps, 115 Volts A. C. has been specifically developed for the printing industry.

The control of heat in melting pots, and in presses, suggests but a few of its basic uses. It will pay you to investigate this new engineering achievement.

In addition to this "High Temperature" Thermostat, Fenwal offers a complete line of electric heat controls with temperature range of — 50° to 600° F. that are every day proving their merit in many other industries.

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slow speed presses. They would not set fast enough, would offset on angle bars and would smudge the sheets. It has been no easy problem to produce news inks for these new conditions.

Not only has it been necessary to obtain improvements in all our raw materials but, new methods of ink formulation have been found necessary. Carbon blacks that are suitable for inks for slower moving presses are unsatisfactory for inks for the higher speed presses and new ones have been developed of necessity. With the higher speeds, the time elapsed between the first and second impression cylinders and the folders is so shortened that suitable inks must be used which set very quickly to prevent smudging or offset. This has made necessary the development of carefully processed oils and vehicles, which will carry the color to the sheet yet quickly penetrate the stock to allow the ink to set.

As I mentioned before, the first toned inks used by the newspapers were quite strongly toned. As time went on, however, there was a reaction to this and the papers asked for inks that would have just enough toner in them to neutralize the brownish undertone of the carbon black in the halftone cuts and yet not cause the whole print to appear bluish.

The reduction in toner was a logical step as the introduction of cleaner oils to news ink had eliminated or greatly reduced the brownish stains of the oil halos and thus there was less need for the toner.

By reducing the toner the prints have assumed a blacker appearance and the prints look clean with sharp contrasts.

Today, after about fifteen years of widespread use of toned inks in this country, we are manufacturing in our eastern plant almost twice as much toned ink as we are untoned, or about 67% to 33%. This is a considerable reduction in the volume of toned inks from five years ago but the big majority of ink made by us is still toned.

The increase in the consumption of untoned ink is undoubtedly due to the use of the cleaner oils. Untoned inks today look sharp and clean and are quite acceptable to some printers. The majority, however, prefer inks in which the brownish undertone natural to carbon black is neutralized by toner addition.

One might ask what is ahead of us in news ink. That would indeed be hard to answer. In recent years there have been many changes throughout the entire field of printing inks. We have seen the introduction of high speed gravure, gloss process inks suitable for the McKee press, heat set and other new types.

Of all these, none seems more interesting than the new Velo ink developed by J. M. Huber, Inc. This ink is a thermoplastic, meaning that it is solid at ordinary temperatures but at higher temperatures it becomes liquid so that it can print. It is possible to print it on all kinds of stock and to run at the highest speeds.

It is sold solid but is printed liquid from a heated press—that is the ink fountain, metal rollers and plate cylinders are heated. The hot ink printed on the cold paper immediately congeals and is set to resist offset and rub.

The prints are sharp and clear, producing strong solids, leaving clean highlights and eliminating strike through. The speed at which this ink can be run is limited only by the speed of the press.

*Sixth*

PRODUCTION YEAR BOOK

A world of technical and production information in compact form divided as follows: Art and Photography, Engravings and Electrotyping, Bookmaking and Binding, Paper and Ink, Printing Processes, Production Data, Typography and Cross-Index.

The 1940 edition consists of 612 pages, of which four out of five are illustrated — book averages two and one-half illustrations per page. Size 8¾ in. by 11¼ in.

**Price $5 per copy**

(Handling margin makes it necessary that price of books accompany all orders)

PRINTING EQUIPMENT ENGINEER

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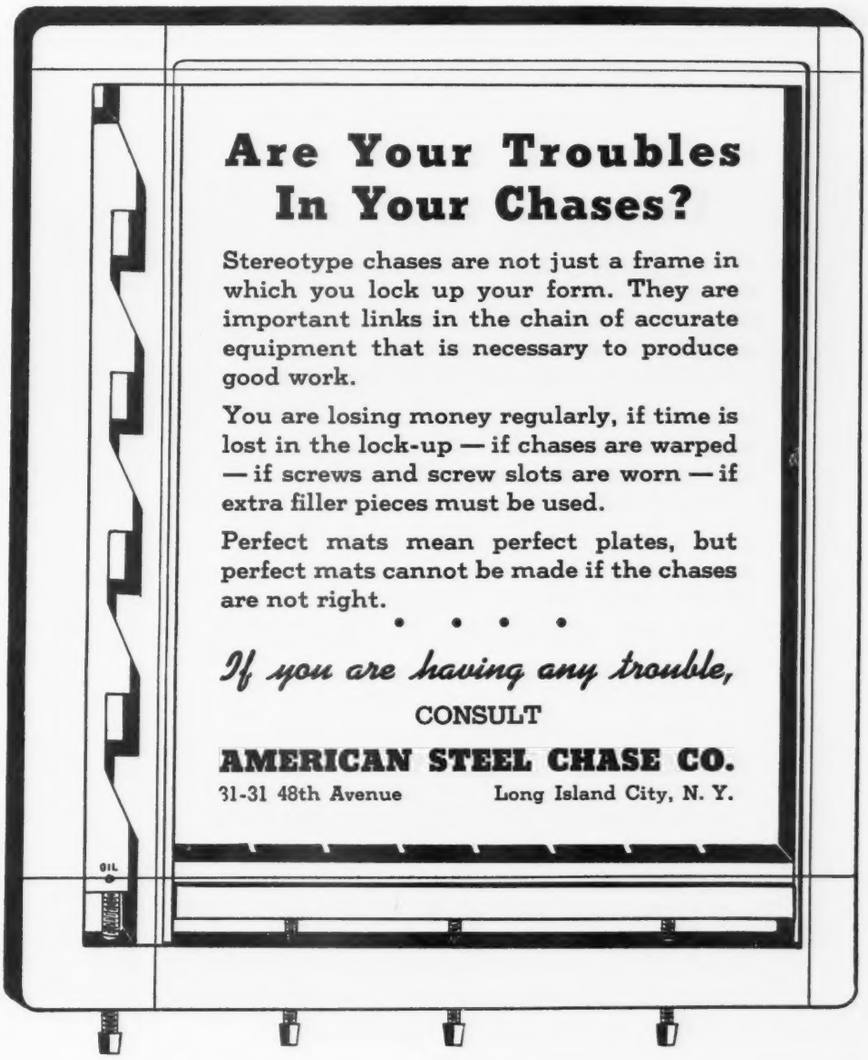
Cleveland, Ohio


Are Your Troubles In Your Chases?
Stereotype chases are not just a frame in which you lock up your form. They are important links in the chain of accurate equipment that is necessary to produce good work.
You are losing money regularly, if time is lost in the lock-up — if chases are warped — if screws and screw slots are worn — if extra filler pieces must be used.
Perfect mats mean perfect plates, but perfect mats cannot be made if the chases are not right.
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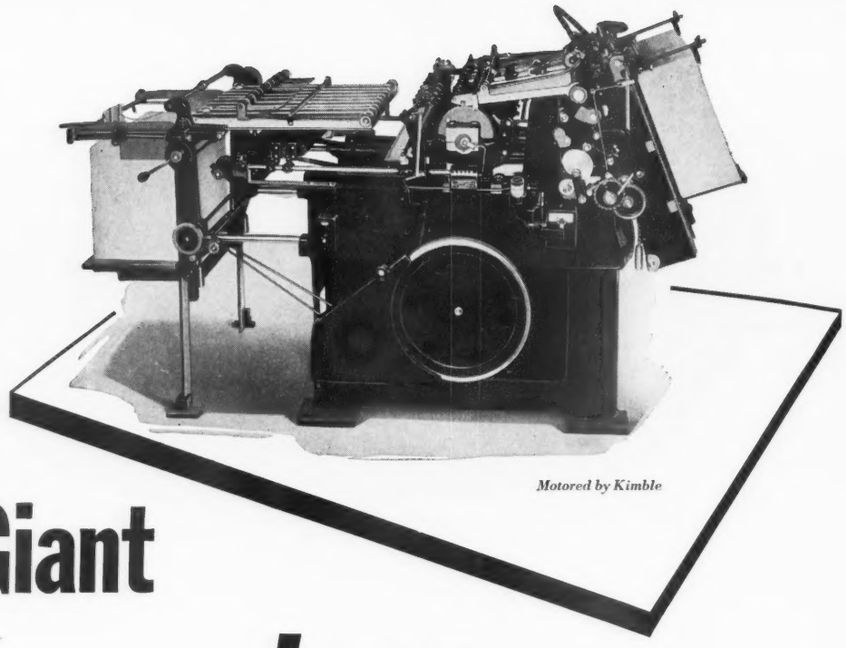

*Motored by Kimble*

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Other famous ATF Presses: Kelly Clipper, 17x22 Kelly, No. 1 Kelly, No. 2 Kelly, ATF-Webendorfer sheet and web offset presses

**ATF American Type Founders**

200 ELMORA AVENUE, ELIZABETH, N. J. • *Branches and Agents in 24 Principal Cities*

Types used: Grayda, Franklin Gothics, Bodoni

# PRINTING PATENTS REPORT

Patents issued from April 30th through May 14th

This patent data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine. For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

## Bookbinding:

2,200,345. METHOD OF CASING-IN BOOKS claimed to produce books having the edges of the pages parallel with the edge of the cover and with the margins the same along all edges. Invented by Carl Schramm, North Coventry, Conn. Assigned to The Smyth Mfg. Co., Hartford, Conn. Application June 13, 1939. 9 claims.

2,200,877. APPARATUS FOR ATTACHING LOOSE-LEAF BINDERS TO BOOKS using plain paper ribbons fed continuously from rolls and sewed through the leaf assemblies and then formed over the perforated edges of the book into rings. Invented by Emil N. Farkas, Chicago, Ill. Assigned ½ to Frank F. Farkas, Chicago, Ill. Application February 10, 1938. 5 claims.

## Composing Equipment:

2,199,772. TYPOGRAPHICAL COMPOSING MACHINE having a novel power drive for shifting the magazine unit, this drive being entirely independent of the usual mechanism for driving the machine proper. The invention avoids expense, etc., by eliminating the mechanical clutch heretofore used for operating the magazine shift from the main drive. Invented by George W. Allan and Albert E. Simpson, Brooklyn, N. Y. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application September 23, 1939. 35 claims.

2,200,022. ASSEMBLER UNIT FOR TYPOGRAPHICAL MACHINES embodying a set of idler gears, for rotating the star wheel, which may be mounted on the original style of assembler plate and so interposed between the drive and driven gears to effect the desired reduction of speed in the star wheel. The invention thus eliminates the necessity of substituting the entire assembler to reduce the speed of the star wheel. Invented by Cleo E. Cook, Kingsport, Tenn. Assigned to Linotype Parts Co., 203 Lafayette St., New York, N. Y. Application January 16, 1940. 7 claims.

2,200,707. TYPOGRAPHICAL COMPOSING MACHINE with new means enabling the operator of a "mixer" machine to compose simultaneously from different selected ones of a plurality of portions of complete matrix fonts in two main magazines without the necessity of shifting the keyboard connection each time the composition requires a change from one magazine to the other. Invented by Richard E. Sylte, Chicago, Ill. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application October 24, 1939. 10 claims.

2,201,084. TYPOGRAPHICAL SLUG CASTING MACHINE with improved means for indenting the type character somewhat from the ends of the slugs to provide marginal columns of white space in the printed matter. Invented by Herman R. Freund, Brooklyn, N. Y. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application February 17, 1940. 19 claims.

## Feeding, Folding and Delivery:

2,199,170. SHEET HANDLING MECHANISM FOR SHEET FEEDERS having a rear suction cup mechanism claimed to more readily separate the upper sheet of material from the next lowest sheet so that one sheet at a time moves through the feeder. Invented by George Goebel and Sherman A. Chantland, Baltimore, Md. Assigned to Crown Cork & Seal Co., Inc., 4401 Eastern Ave., Baltimore, Md. Application January 20, 1939. (Division of Original Application made June 10, 1935.) 19 claims.

2,200,367. IMPROVED SHEET REGISTERING AND DETECTING MECHANISM with means for making adjustments of sheet guides and detectors with respect to the printing machine with which the feeder is used, but without alteration of the adjustment to each other. Consists of an auxiliary feeder frame, front guides and a side guide carried by the frame which is attached to the frame of the printing machine. Invented by Charles W. Harrold, University Heights, Ohio, and James R. Wood, Shelton, Conn. Assigned to Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio. Application June 2, 1938. 26 claims.

2,200,408. SHEET FEEDER having an improved sheet arresting device comprising a stop or stops located near the front lay registering position on the side nearer to the machine in the direction of movement of the sheet. The invention is intended to prevent further movement of a sheet until the front lays have returned to the registering position. Invented by Headley Townsend Backhouse, London, England. Unassigned. Application December 4, 1937. 4 claims.

2,200,409. SHEET FEEDER combining a layboard and front lays with means for moving a stream of sheets over the layboard with the rear of each sheet overlapping the succeeding sheet, supplementary sheet impelling means being provided which are operable to engage the rear edge of each leading sheet in turn as the front edge of that sheet approaches the front lays, this supplementary means serving to thrust the sheet forward in addition to the normal movement of the sheet stream. Invented by Headley Townsend Backhouse, London, England. Unassigned. Application February 16, 1939. 9 claims.

2,200,438. WEB ROLL ROTATION CONTROL for regulating a web roll from which a running web is being drawn off and fed into a machine. The invention uses weights in series to effect the desired pull on the straps. Invented by Henry A. Wise Wood, New York, N. Y. Assigned to The Wood Newspaper Machinery Corp., New York, N. Y. Application March 19, 1936. 13 claims.

2,200,905. WEB SPLICING DEVICE for providing a splice for the offset web for a printing press. The invention relates particularly to the winder for such arrangements, and has novel means for piercing the web. Invented by Henry A. Wise Wood, New York, N. Y. Assigned to Wood Newspaper Machinery Corp., New York, N. Y. Application November 13, 1934. 13 claims.

2,200,937. SHEET DELIVERY APPARATUS having improved means for employing air under pressure in controlling the deposit in a stack or delivery pile of successive printed sheets. Invented by Harry E. Stolper, Brooklyn, N. Y. Assigned to Mail & Express Printing Co., Inc., New York ,N. Y. Application May 6, 1939. 9 claims.

The metal that wins friends with good impressions

IN letter press shops throughout the United States, A-Z Alloy is making millions of good impressions every day. Here is a metal which wins in the long run. On a specific test conducted by a New York Printing Company, an ordinary zinc cut went dull and smuggy after 200,000 impressions, while an identical cut on A-Z Alloy on the same press still printed clean and sharp after 500,000. A well-known newspaper is today obtaining from 500,000 to 600,000 perfect impressions from curved original A-Z Alloy plates on each edition.

The reason for this metal's success, as well as that of Zomo Electric Zinc, is something which no other engraver's zinc can have — the uniformity produced in the electric induction furnace.

*You can now order Zomo Electric Zinc and A-Z Alloy, plain or Backoted from leading metal suppliers in the United States, Canada and England.*

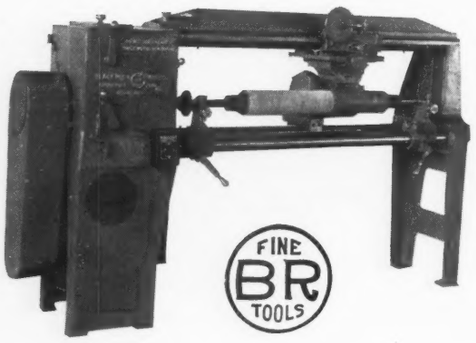
ZOMO ELECTRIC BACKOTE

A-Z ELECTRIC ALLOY BACKOTE

# THE WORLD SEEMS UPSIDE DOWN

## *and part of this Black Rock Machine*

## IS BUILT THAT WAY




This machine was designed for small rollers and tubes and has a capacity of ½″ to 8″ in diameter and 44″ between journals or centers.

The BLACK ROCK 4-LM Grinder and Polisher shown does have an "upside down" feature. This feature is the manner in which the ways and carriage are mounted above the work to keep them free of the dust and dirt when grinding.

In addition to this machine for small rollers BLACK ROCK also makes grinding and polishing equipment for rollers up to 12″ in diameter and 12′-8″ between centers or journals. These BLACK ROCK machines are used by practically all the manufacturers of printers' rubber rollers.

***Mr. G. L. Hammond will be registered at the Drake during the A. N. P. A. Mechanical Conference***

## BLACK ROCK MANUFACTURING COMPANY

**Export Office**
**305 Broadway, New York City**

**177 OSBORNE STREET**
**BRIDGEPORT, CONNECTICUT**

**Pacific Coast Representatives**
**Lombard Smith Co.**
**2032 Santa Fe Ave., Los Angeles, Cal.**

# *CUSHMAN—*

## *MAKE THE BEST*

• • •

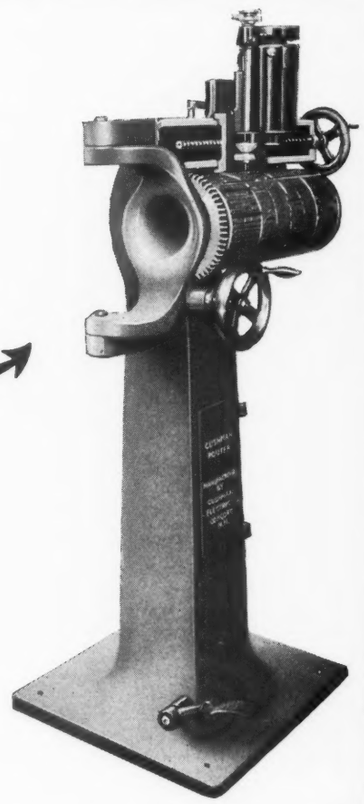
**HERE ARE TWO OF THE FINEST**

***On the Right***

**the curved plate router for users of Duplex Presses**

***On the Left***

**the offset motor for Linotype . . . Intertype and Linograph users.**



## CUSHMAN ELECTRIC COMPANY

**CONCORD, NEW HAMPSHIRE**

*Investigate the*

**STEREOTEX HYDRAULIC**

*for better black-and-white and color mats*

**America's Most Efficient, Accurate, Speedy Direct Pressure Matrix Press**

Built in 5 Sizes:
1200, 800, 400, 300, and 250 Tons

**EFFICIENCY**

Built by one of America's leading hydraulic press manufacturers, the STEREOTEX HYDRAULIC incorporates the latest inventions and improvements in hydraulic press and valve design, adapted today to tomorrow's requirements of the stereotyper and electrotyper.

- Automatic pressure drop, automatic timing and automatic opening are standard features of the press.
- The top platen may be free vented or provided with a suction device to accelerate drying. (Patented)

**OUTPUT**

When COLD-moulding — *four* mats per minute. When HOT-moulding — (a) on our Single-Sided Press — *one* baked mat in three minutes; (b) on our patented Double-Acting, Double-Production Press — *two* baked mats in three minutes — all of superlative quality.

**VERSATILITY**

The STEREOTEX HYDRAULIC is designed either for producing mats, lead moulds, wax moulds, rubber plates, or plastic plates exclusively, or for a combination of these classes of work.

**WRITE FOR FULL PARTICULARS!**
**SEE THE MACHINE IN OPERATION!**

**STEREOTEX MACHINERY CO.**

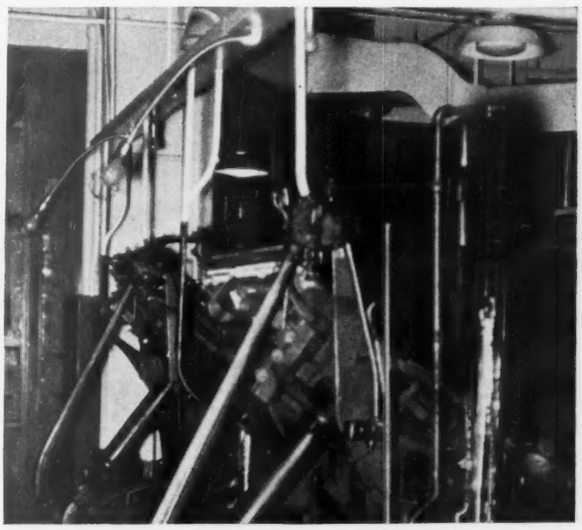
**STAMFORD, CONN.**

**C. FRITSCHI, G. M.** **P. O. BOX 167**

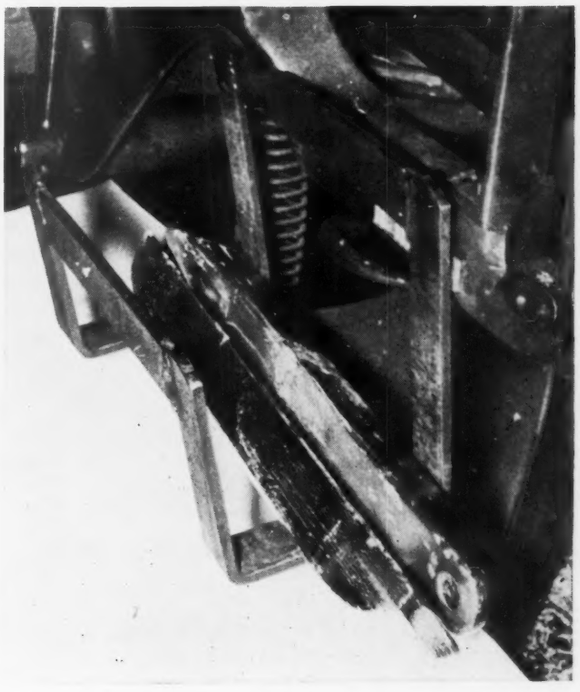
## *Trouble Lamp Illuminates Distributors*

ALL OF THE line wires, water and gas pipes for the line-composing machines in the plant of the Youngstown (O.) *Vindicator* are carried in shallow overhead metallic troughs. The overhead installation, of course, runs parallel to the rows of machines. By this means it will not be necessary to "open up" the floor in case it is decided

(*Continued on page 94*)



**In Youngstown (O.) Vindicator composing room, the distributor trouble lamp for line-composing machines extends via goose-neck from the bottom of the overhead service trough.**



**This Margach pig rack fastened to line-composing machine frame was constructed of steel bar welded as shown.**

# You Don't Have To

write for details or recommendations on any of the New England Newspaper Supply Co.'s **Press Packing** because we have been supplying you for years with the World's Finest Cylinder Packing.

Made and Sold by men who have spent the best part of their lives in the use and manufacture of these packings.

Our men know the problems and requirements that are necessary for the manufacture of **Press Packing** that will give you the best results for **High Speed** and **Quality Printing.**

So why not use **The Originals** and not imitations.

Your problems can best be met by using any of the following:

- Stipple or Plain Coated Felt
- Plain Repressed Felt (For Duplex Flat Bed Type)
- De Luxe Monocork
- Oil-proof-face Rubber
- Italian Red Rubber
- Bismark Brown Rubber
- Plated Face Rubber
- Stipple or Plain Automatic Tympan
- Gold Cloth

and almost any combination of packing to take care of any special problem you may have for **Quality Printing.**

We also carry a complete line of Stereotype Supplies

USE **ORIGINALS** and NOT **IMITATIONS**
Known, sold and used all over the World

o O o

## New England Newspaper Supply Company

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**NEW YORK . . . . . 230 West 41st Street**
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**SAN FRANCISCO . . 205 De Young Building**

# SO HE USES MERCURY ROLLERS

**And he's right! They are durable.**
**To meet the rigorous demands of modern high-speed presses, MERCURY rollers have been scientifically engineered along the most advanced lines. As a result, they can take punishment and come back for more. Particularly appreciated by pressman is the delicate exactness with which these super-rollers are balanced . . . and the consequent elimination of vibration. Increase the efficiency of your press operation . . . order MERCURY rollers now.**

- **Perfectly concentric**
- **Durable**
- **Economical**
- **Uniform quality**
- **Uniform contact**

WATCH FOR OUR **Important Announcement at A.N.P.A.** CONVENTION

## RAPID ROLLER CO.

D. M. Rapport, President

Federal at 26th, Chicago, Illinois

HERRICK *quality* MARCHES ON

YESTERDAY.. Herrick Inks and service helped printers and publishers establish high quality in their work.

TODAY..... Herrick efficiency is still the password to quality production.

TOMORROW . Herrick Inks and service will continue to provide maximum value plus top-flight printing efficiency.

Remember these points when specifying ink for your next job

NEWS INKS, WEBB PRESS COLORS, HALF-TONE BLACKS, NON-SCRATCH BLACKS, DULL BLACKS, PROCESS COLORS

William C. Herrick Ink Company, Inc.

330 WEST 34th STREET NEW YORK, NEW YORK

cylinder and plate clamping mechanism whereby the operating handle is prevented from being placed in operating position without causing the machine to be inoperative. Invented by William Lewis, Cleveland, Ohio. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application January 15, 1938. 3 claims.

2,200,316. CONTROL FOR PRINTING MACHINES consisting of a guard for the plate cylinder such that the machine may be operated with greater safety. Provides means for stopping the machine by letting the plate move the guard should it become detached from the machine. Invented by William C. Wieking, Woodhaven, and August Baumgartner, Hollis, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application December 24, 1936. 3 claims.

2,200,920. PLATEN PRINTING MACHINE for the production of all kinds of ink cloth printing. Invention provides novel feed for the carriage carrying the rubber cylinder and the paper magazine and does away with the complicated frame which caused the unwinding from a roller to take place slowly and irregularly. Invented by Ludwig Gerard, Mannheim-Feudenheim, Germany. Unassigned. Application March 21, 1939. 4 claims.

2,201,008. WEB-FED PRINTING PRESS wherein the ink, etc., is applied according to the intaglio principle. The press includes printing couple units comprising a printing member, an impression member, and an inking appliance so arranged that the printing couple is separated without disturbing the existing printing position of the web. Invented by Charles J. MacArthur, Glen Ridge, N. J. Unassigned. Application July 25, 1939. (Division of Original Application December 17, 1937.) 7 claims.

# *Metal Recovery from type metal dross discussed at Pennsylvania Newspaper Mechanical Conference*

By R. SCHNEIDER*

*Sharon (Pa.) Herald. *Abstract of paper delivered before the Pennsylvania Newspaper Mechanical Conference, April, 1940.*

WE men in the mechanical departments of newspapers have a big responsibility in these days of rapidly increasing costs. We have the opportunity of making ourselves invaluable by studying the problems of our respective departments and making suggestions for lowering costs. Sharon *Herald* employes are encouraged to make suggestions, and there is every incentive to carry on experiments. Recently we have been studying the question of dross from our type metals.

The *Herald* produces from 10,000 to 12,000 lbs. of type metal dross annually. This represents an annual charge of about $1000. Recently we heard of a renovator. It had been on the market over ten years but found few sales.

The *Herald* management arranged to have a machine installed on trial. When it arrived, the stereotype and composing room boys began to experiment. We found the machine had merit. The results exceeded our expectations. For every 100 lbs. of dross we treated we recovered over 70 lbs. of metal. An analysis showed our metal recovery had the same percentage of lead, tin, and antimony as the original metal.

This experiment was such a surprise we immediately began to wonder whether the *Herald* was too extravagant in handling its dross. We accordingly made arrangements with nearby papers to give us samples of their dross. The results are rather startling, and we give them herewith, showing the percentage of recovery:

| | |
|---|---|
| Sharon *Herald* | 72.2% |
| Paper A | 72.4% |
| Paper B | 70.4% |
| Paper C | 70.9% |
| Paper D | 48.0% |

Recoveries from each 100 lbs. ran all the way from 40 to 94% of *Herald* dross. That from Paper A ranged from 67 to 80%. The other dross made one run.

The low recovery from Paper D is explained by the mechanical superintendent who takes his dross every few days, super heats it, and recovers about 50%. He advises that under his method he has reduced dross from one drum to half a drum per week. This shows that Paper D's dross recovery would be in line with other papers if it were not

Said Mr. Schneider: *We welcome sales representatives in the* Herald *office. We find that time spent with them is highly profitable. Reading trade papers is also invaluable. Our company encourages its men to visit sister plants, and to "snoop" around with the hope that they may discover something that will decrease* Herald *costs or improve the quality of the paper. These trips are not limited to heads of departments, younger men being singled out who some day will hold the key jobs.*

treated. The recovery from the remaining dross by the process we are using would quickly return additional dividends.

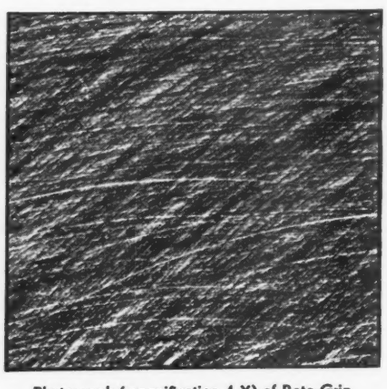
Some time ago, one of the manufacturing companies put a sifter on the market. The *Herald* purchased and was recovering 30%. We considered this excellent, but when we took the sifter residue we got another 40% recovery. The sifter is to be highly recommended to the smaller publication where the management cannot see its way clear to purchase a renovator. In the case of the *Herald* and papers of its size, our experiments show that a renovator will amortize itself in less than a year and thereafter return a profit.

You are naturally curious as to operating cost. We have our renovator in the flat-casting department. Twice weekly the men will start the machine and let the dross refine itself while they are engaged in other duties. Gas is used for heating, and at our rate, we figure a dollar's worth of fuel will suffice for a year. The flux cost per heat is a few cents.

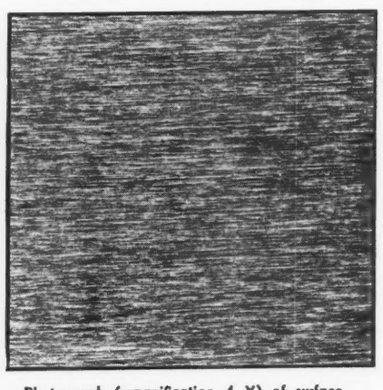
We have discussed the merits of the renovator with the metal salesmen. They assure us they are not opposed to its use and their companies try to be helpful to publishers. One salesman marvelled at our results, fingered the powder-like residue, and assured us our dross account would be profitable to his company. They warn, however, that metal should be periodically analyzed to insure being kept at the right proportions for best operations.[1]

[1]After a long discussion among executives present, Sharon *Herald* representatives agreed to keep an accurate check on their own metal as well as the dross of several neighboring papers for one year and report fully to the 1941 Pennsylvania Newspaper Mechanical Conference.


NO DEEP SCRATCHES



Photograph (magnification 4 X) of Roto-Grip Finish showing finishing scratches running in every direction.



Photograph (magnification 4 X) of surface produced by old polishing processes. Scratches run in one direction only.

Old fashioned finishing makes deep parallel scratches. There are no deep scratches in Roto-Grip — none as deep as the engraver makes in ordinary pumice cleaning. In the old type polishing process every scratch and hollow is deepened with every step. In Roto-Grip every scratch is of uniform extremely shallow depth and crossed and recrossed to form a perfect "tooth" to grip enamel.

ROTO-GRIP

EDES ROTO-GRIP FINISH ZINC

Roto-Grip is smoother, more uniform, gauge accuracy guaranteed within one half of one thousandth of an inch. Makes better plates faster.

THE Edes MANUFACTURING COMPANY

PLYMOUTH, MASSACHUSETTS, U. S. A.

SALES REPRESENTATIVES

CHICAGO: Chemco Photoproducts Co.
NEW ORLEANS: Chemco Photoproducts Co.
ST. LOUIS: Mid-West Photo Eng. Supply Co.
WASHINGTON, D. C.: E. H. Walker Supply Co.
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BUFFALO: C. S. Illingworth
DETROIT: Eaton-Clark Co.
AKRON: Metzger Photo Supply Co.
CINCINNATI: G. C. Dom Supply Co.
SAN FRANCISCO: Selby Mohr
ATLANTA: Lamar-Rankin Co.

DENVER, OMAHA, HOUSTON, MINNEAPOLIS, KANSAS CITY, MEMPHIS, TULSA, OKLAHOMA CITY, SAN ANTONIO, WICHITA, DES MOINES, DALLAS — Thompson-Hayward Chemical Co.


## *New Cromwell Addition*

The construction of the third addition within eight years to the plant of the Cromwell Paper Company, Chicago, is being undertaken. According to President Joseph Weil, the new section will provide floor space required by increased production and expanded manufacturing plans. Reported cost of the building and land is $100,000.

The new fourth unit is 25,000 sq. ft. area and will increase the total area of the building to 99,490 sq. ft. The new section blends architecturally with the first three units. All are of pressed brick construction with terra cotta trim, one story high, with wood truss roof, insulated and sky-lighted. The entire plant is sprinkler equipped and the offices are air conditioned. The new section will be equipped with a new enlarged power plant and a two-truck shipping court.

The unit is scheduled for completion in 90 days.

# EQUIPMENT SALES

## *Newspapers Install Ludlow Equipment*

Ludlows have been installed recently by the Rochester (Minn.) *Post-Bulletin*, Buffalo (N. Y.) *Evening News*, Montreal (Que.-Can.) *Le Canada*, Dover (N.J.) *Lake Land News*, Niles (Mich.) *Daily Star*, Billings (Mont.) *Gazette*, Fort Lauderdale (Fla.) *Daily Times*, Holland (Mich.) *Sentinel*, Elyria (O.) *Chronicle-Telegram*, Fairfield (Conn.) *News*, Hyde Park (Mass.) *Tribune* and Providence (R. I.) *Visitor*.

## *Newspabers Install Elrod Equipment*

Elrod lead, slug, rule and base casters have been installed recently by the New York *Times* (2), Atlantic City (N.J.) *Daily World*, Rochester (Minn.) *Post-Bulletin*, Wilmington (Del.) *News Journal*, Philadelphia (Pa.) *Daily News*, Fort Lauderdale (Fla.) *Daily Times*, Tyler (Tex.) *Courier-Times*, Compton (Calif.) *Herald*, Rome (Ga.) *News-Tribune*, Ames (Iowa) *Daily Tribune*, San Rafael (Calif.) *Independent*, and Montreal (Que.-Can.) *Le Progres*.

# WHAT "VISIBLE" CONTROL OF TYPE METAL TEMPERATURES

## *Means to your Composing Room*

Every composing room superintendent knows it is important to have accurate control of composing machine type metal temperature. But it is also highly important to have that control "visible." Temperature control that can be seen instantly saves time and trouble in determining metal and machine troubles. This instant "visible" control is given by the

**PARTLOW INDICATING CONTROL**

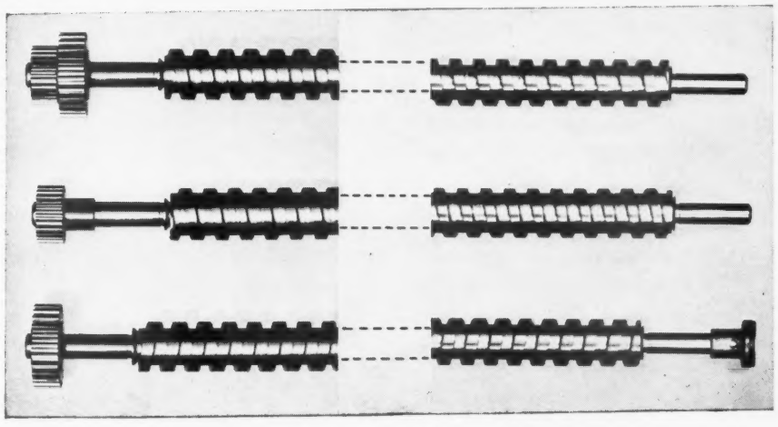
This device is a combination of controls for accurately indicating and controlling the temperature of type metal for Linotypes, Intertypes and Monotypes whether heated by gas or electricity. With Partlow controls installed, fuel is saved, better slugs are made, fewer machine troubles are encountered and greater production is assured.

Write today and let us send you complete information on this "visible" means of controlling your type metal temperature.

**Visit Booth No. 76 in tower room of Drake Hotel, Chicago, June 10-11-12, at the Mechanical Conference of the A.N.P.A.*

**THE PARTLOW CORPORATION, NEW HARTFORD, N. Y.**

# AT A SURPRISINGLY LOW COST



These screws will give **smoother** as well as faster distribution. Send for fully descriptive circular.

OLD LINOTYPES CAN BE CONVERTED TO *Fast Distribution..*

Faster distribution of matrices to the magazine has the effect of *increasing* the number available to the operator. To put it another way — *Smaller* fonts may be used.

The amount of money saved on each font multiplied by the number of fonts used will more than pay for these fast screws!

ACE BELTS on Linotype or Intertype machines spell the end of belt worries. No stretching—No slipping Longest wear. The only belt **guaranteed** for a year.

Precision TRADE ★ MARK Parts

**LINOTYPE PARTS COMPANY**

**NEW YORK** 203 Lafayette Street
**CHICAGO** 318 West Randolph St.
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**DENVER** 1441 Blake St.
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The BIG WORD
*in Type Metals*

Blatchford METAL

E. W. BLATCHFORD COMPANY · REPUTATION · EST'B. 1854 · INCO. 1890 · A TOWER OF STRENGTH

CHICAGO
900 West 18th St.

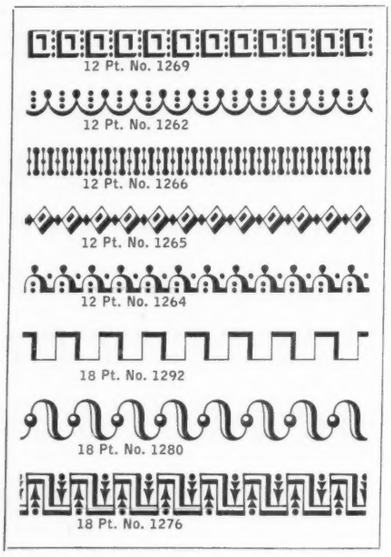
E. W. BLATCHFORD CO.

NEW YORK
63 Park Row

### *Caravan Decorative Material*

Linotype has introduced a new series of typographic decorative designs by W. A. Dwiggins. The series named Caravan Decoration, is comprised of twenty-eight different designs, each available in matrix-slide form, states C. H. Griffith, vice president in charge of typographic development.

"We believe the Caravan series strikes a new and lively note in typographic ornament," Mr. Griffith mentioned, "which will brighten contemporary printing and advertising typography to a considerable degree. The group of designs has been christened 'Caravan' because the idea for them came from a set of stencilled borders, distantly Chinese in inspiration, used to frame maps and pictures in an edition of *Marco Polo's Travels* which Mr. Dwiggins designed several years ago."




### *New Boston Manager*

G. J. Stickley, Connecticut representative, has been appointed Brandtjen & Kluge's Boston branch office manager. The Boston office was moved recently to larger quarters in the Western Union Building at 115 High St.

### *Purchase Reid Bros.*

Montgomery & Bacon, Towanda, Pa., manufacturers and dealers in line-composing machine parts and supplies, have announced the purchase of the similar part of the business of Reid Brothers, Beverly, Mass., on Monday, May 6. Reid Brothers' machinery and stock used in the manufacture of composing machine parts and accessories, have been moved to Towanda. Montgomery & Bacon moved into a new plant during the first part of May and will erect another building to take care of the machinery obtained from Reid Brothers. All Reid Brothers orders will be filled by Montgomery & Bacon.

## TYPOGRAPHY

(*Continued from Page 6*)

type in 1041. There was no suitable ink for it. Besides, the large number of characters in the Chinese language made engraved blocks preferable. To printers, the word "pi" means jumbled type.

Playing cards (called "sheet dice") and printed paper money were in use in China along about the end of the tenth century.

### *Korean Type Casting*

Type casting in Korea was begun in 1403. The type was made of bronze. It was formed on the principle of the arch, being cylindrically concave on the under side. The purpose was to secure a firm hold on the bed of beeswax which constituted the form. A shallow tray was filled with wax and the type was imbedded in it and planed. Ink was applied with a brush and the impression was made by brushing a piece of felt over the paper laid on the inked type.

### *Enter Gutenberg*

In 1440 Gutenberg was 43 years old. He was born in Mainz, Germany. His parents were Frielo Gensfleisch and Else Gutenberg. The inventor of printing would have been known as John Gensfleisch, but a German custom at that

## Fear or Respect?

*MISTAKENLY, some mechanical executives are just that—they are entirely too mechanical. They are apt to regard the people working under their supervision as so many boxwood pawns to be shoved around a chessboard. This brings up the thought expressed by a prominent executive who bears an extremely favorable reputation for his regard for the human element. A hasty decision is arrived at in which a discharge is involved quite often has its effects upon the entire working personnel.*

*Acting under a decision which results in the immediate discharge of an offending worker might cause employes to gather the impression that they are working for the supervising executive on a "fear basis" rather than one of respect. The employe, therefore, is compelled to regard the boss more for the position he holds than for his qualities as a man. Under such conditions, the supervising executive is at a disadvantage.*

*There is considerable difference between fear and respect in relation to production. The production received under the former usually represents the minimum. Production received under wise administration is given cheerfully. The executive who possesses the ability to put himself in the place of the offender before arriving at a decision is the successful executive.*

*Won't you "think yourself over" to find out just what kind of executive you are?*

time permitted his mother, who was the last surviving member of her family, to give her first son her family name to keep it from becoming extinct. John's younger brother was named Frielo Gensfleisch, like his father. Gutenberg was married, but left no descendants. His remains repose in the church of St. Francis, of Mentz.

Gutenberg's print shop was located in Strassburg. His invention was superior to any method of printing then in use. He cast his type in an adjustable metal mold. His press was an adaptation of the cheese or wine press then in general use: a wooden frame with a vertical screw through a cross beam with threaded hole. Turning the screw lowered or raised the platen. His ink was lampblack mixed with boiled linseed oil and was applied to the type with inkballs. These balls were made of sheepskin stuffed with wool and were mounted on handles. With these tools Gutenberg was able to produce about 20 printed impressions an hour. Taking these things into consideration, the quality of his work is indeed remarkable.

The wandering printer in the fifteenth century needed only a hand mold in which to cast type. During the first quarter century of typography a new type face was used each time a new press was established. When the printer found a monastery, or other place that had a job of printing to be done, the printer would begin to make matrices like the letters in the book (probably written by hand by scribes) he was to reproduce. Lead, for the type, and paper had to be procured. The press was usually home made. All these preparations took probably several years before the actual printing began.

Gutenberg's type was similar to the Old English of today. The most notable book printed from this type is the Gutenberg 42-line Bible, in Latin. (There are 42 lines of type in each of two columns on a page.) It is estimated that about 210 were printed, 180 copies on paper and 30 copies on vellum. Each vellum copy required the skins of about 300 sheep. The paper used was handmade, of finest quality. It is watermarked with a bull's head, a star, and a bunch of grapes. In

The BIG WORD
*in Plate Mounting*
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E. W. BLATCHFORD COMPANY · REPUTATION · EST'B. 1854 INCO. 1890 · A TOWER of STRENGTH
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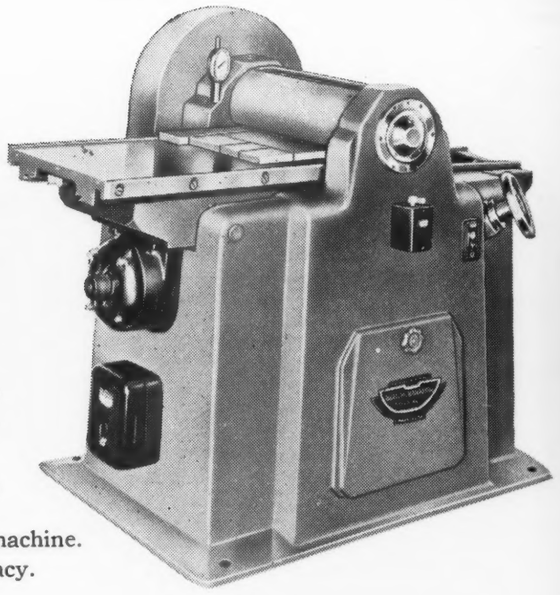
Does your
SHAVER
have these ADVANTAGES



Compare the following six features of the Barker Rotary Shaver with the machine you are using.

- Engineered for heavy duty precision work.
- No complicated clutches — Starting button and convenient lever operate this machine.
- Cutters can be dressed without removal from machine.
- From type high to 16 gauge with .001″ accuracy.
- Range of from 2″ by 2″ to 18″ by 24″ on cuts.
- New safety standards — Fully enclosed.

Let us send you complete details on the Barker Rotary Shaver. Just write to —

Here's a shaver that will give your plant the highest shaving efficiency at the lowest cost. It's a time and money saver.

**ROBERT W. BARKER, Inc.**
**212 SOUTH DARIEN STREET PHILADELPHIA, PA.**

AGENTS
American Pub. Supply, P. O. Box 131, West Lynn, Mass.
Dudley S. Smith, 504 Bulletin Bldg., Philadelphia, Pa.


1926 a copy of this Bible (in 2 volumes) was bought in a New York auction room for $106,000 by Dr. Rosenbach, a noted book collector of Philadelphia. He later sold the copy to a patron of Yale University for $120,000. In September of the same year, a 3-volume copy of this book, printed on vellum, was bought in London by Dr. Otto Vollbehr, a noted German collector, for $275,000, plus taxes and fees which made the total cost $305,000.

### *Other Early Printers*

The first recorded printer other than of German birth was Nicolaus Jenson, a Frenchman. The type he designed in the fifteenth century is still regarded as one of the finest type faces in use. Clarendon, Elzevir, and Garamond are among other old familiar types.

By 1567 there were so many type faces that Christopher Plantin, in Antwerp, issued a book of type specimens. Today there are hundreds of types in use. The American Type Founders, at Elizabeth, N. J., have a stock of 2,500,000 matrices divided among 3,000 type faces.

Holland and France claim to have been among the first to experiment with typography. England was the first country to start printing in the native language — a departure from the Latin of other pioneer printers.

In France, in 1571, the working hours of printers were from 6 a.m. to 8 p.m. in summer, and from 7 a.m. to 9 p.m. in winter.

In 1585 King Henry III, of France, issued an edict relieving printers from a tax as artisans on the ground that the work of a printer was so far superior to that of other mechanics that he was not to be regarded as a mechanic at all.

### *The Point System*

Since 1886 type sizes in America have been based on the point system, which was modified from that in use in France. A point is approximately 1/72 of an inch. Type sizes once were known by names, such as, excelsior (3 point), brilliant (3½), semi-brevier (4), diamond (4½), pearl (5), agate (5½), nonpareil (6), minion (7), brevier (8), bourgeois (9), long primer (10), small pica (11), pica (12). Larger sizes were multiples (in lines) of these, as 14 point: 2-line minion; 18 point: 3-line nonpareil, etc.

### *Composing Machines*

For more than 400 years after Gutenberg's introduction of movable type all typesetting was done by hand. According to the *London Weekly*, of December, 1911, a framed copy of the *Family Herald* for the week ending December 17, 1842, hangs in one of London's oldest printing houses. This is claimed to be the only copy of the *Family Herald* in existence. It has a picture of what the editor calls the first "composing machine," invented by Young, with which the type for that issue was set. This seems to be the only record of such a machine.

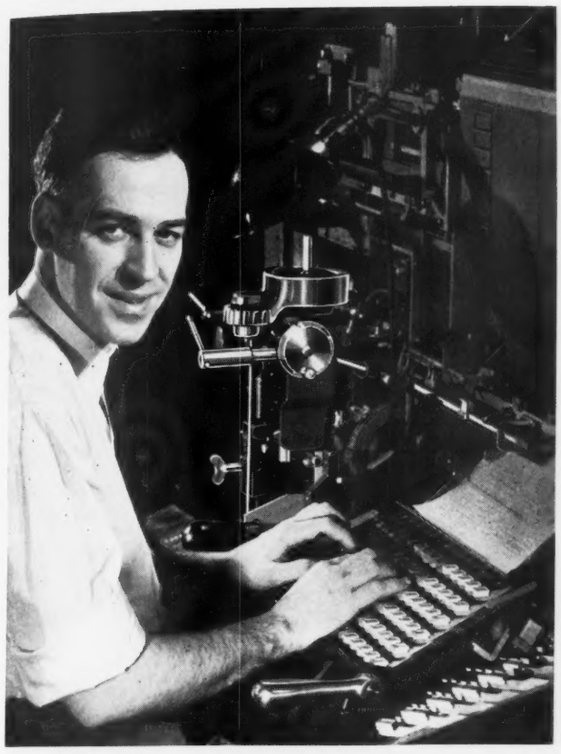
In the early seventies of the nineteenth century the typewriter came into use, and inventive geniuses visualized a machine of this nature for setting and casting metal type. Millions of dollars were spent in promoting various composing machines. A notable one was the Paige Compositor on which Mark Twain lost a fortune.

The first practical Linotype, by Ottmar Mergenthaler, was used in 1886 by the *New York Tribune*. Besides the linotype, there is now the Intertype and the Linograph similar in operation. The Lanston Monotype casts individual characters, similar to foundry type. The Ludlow machine casts type characters on slugs from matrices assembled and distributed by hand.

### *Automatic Typesetting*

In 1928 a teletypesetter was demonstrated in the plant of the Rochester (N. Y.) *Times-Union*. It was originated by Walter W. Morey. The first machine was built in Chicago. This is an attachment for any standard typesetting machine, such as the Linotype or Intertype, and automatically operates the machine by electrical impulses. A perforated tape, typed on a master keyboard, controls these impulses from a sending apparatus to a receiving mechanism which reproduces the tape. In the typesetting unit this tape operates the keyboard with speed and accuracy. Teletyping can be transmitted by telegraph. A number of

# "WE'VE CURED A PAIN IN THE NECK



WITH OUR

# MOHR SAW"

"Those odd-measure jobs, run-arounds, and cockeyed paragraphs used to mean a lot of grief before we got our Mohr Saw. But now they're as easy as straight run stuff." The Mohr Saw automatically cuts each slug as it is cast—drops it into the galley exactly the right length, even to split points. Just a turn of the dial gives the measure you want. If improved typography and reduced production costs are important to you, it will pay to investigate this indispensable accessory.

FREE

This interesting booklet shows how to handle all kinds of tricky odd-measure jobs most effectively—valuable hints for the composing room.

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See us at Booth No. 78 — A.N.P.A. Mechanical Conference, Drake Hotel, Chicago.

**MOHR LINO-SAW CO.**

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*and* PM . . .

*America's most talked about newspaper selects*

*this newly Streamlined*

# LAKE ERIE DIRECTOMAT

Pictures . . . color . . . black and white . . . speed measured in seconds . . . quality reproduction of halftones and type,— those are some of the exacting requirements that make PM's selection of the Lake Erie Directomat a dramatic tribute to its performance. With composition and plates produced by A. E. Munyer Electrotype Co., PM joins such distinguished newspapers as *Buffalo Courier-Express, Chicago Herald-Examiner, New York Daily News, Milwaukee Journal, Pontiac Press, Toronto Star,* and others who have placed the responsibilities of black and white and color stereotype moulding on Lake Erie Directomat.

*Write for facts on Directomat Performance and Economies.*

**LAKE ERIE STEREOTYPE EQUIPMENT CORP.**

*Division of Lake Erie Engineering Corporation*

**Box 568 Kenmore Station** **Buffalo, N. Y.**

# Rotary Head Plate Shaving Machine

Handles perfectly work from full newspaper page down to minimum size casts.

Stationary head, adjustable for wear, operating on roller bearings.

Spiral-shaped one piece high speed tool steel cutter.

Raising and lowering bed, 19 x 27 in., oil-driven; no bronze nuts and screws to rattle and chatter.

Direct-reading dial micrometer indicator, graduated in thousandths of an inch, for rapid and precise setting.

Cuts accurately from type-high down to 16 gauge thickness.

Vacuum chip remover and portable container.

Texrope drive.

● *Mechanical executives are invited to see and operate this Shaver at our Booth Nos. 42-44-46 at the Drake Hotel.*

**THE OSTRANDER SEYMOUR COMPANY**

**1874 South 54th Avenue • Cicero Station • Chicago, Illinois**

EASTERN OFFICE, CHRYSLER BUILDING, NEW YORK CITY


widely separated typesetting machines can be controlled simultaneously by one operator. Setting type by means of a perforated tape is also a feature of the monotype.

The Semagraph is a system for transmitting copy by wire, typing it upon specially prepared paper, and automatically operating Linotype or Intertype machines from the paper typed on the Semagraph typewriter. In 1939 this system was demonstrated by the inventor, Buford L. Green, in transmitting 10,000 words of news copy from the general offices of the Associated Press, in New York, to the *Charlotte* (N.C.) *Observer*, 611 miles away. The Semagraph Keyboard operating unit is actuated by a photo-electric cell.

### *Press Improvements*

About the year 1500 the old wooden-screw printing press was improved by a copper screw. A sliding bed was introduced, a tympan and frisket were added, and the platen was made larger. This press could produce about 200 impressions an hour.

In 1620 William Blaeu, of Amsterdam, made improvements on the press then in general use which increased its production to 250 impressions an hour. The Blaeu style press was first used in America by Stephen Daye and later by Benjamin Franklin.

In 1939 the United States issued a 3-cent postage stamp with a picture of the Stephen Daye press to commemorate the 300th anniversary of the beginning of printing in this country. The press, with type and equipment, was sent from England, in charge of Rev. Jesse Glover, for the use of Harvard Academy. Daye, a printer, came along. Glover died at sea. Daye set up the press as planned. The first work printed was the "Freeman's Oath." In 1648 Samuel Green took charge of this press. In 1658 he printed 2,000 copies of the Bible in the Indian language.

The Stephen Daye press is sometimes confused with the Washington hand press. The latter was made by R. Hoe & Company, beginning in 1827. Many Washington presses were sold all over the world. Some of this type are still in use by process engravers and platemakers.

Most of the printing, especially in the smaller shops, is done as letterpress printing. This is similar to the method of Gutenberg in that the impressions are made direct from type and type-high material on platen or cylinder presses. Type-high, or height of type to paper, is 0.918 in. in America, with slight variations in Europe.

### *Lithography*

Lithography is a method of printing widely used. Again "the Greeks had a name for it," so we got *litho* from *lithos* (stone) and *graphy* for *grapho* (to write). At first, lithograph printing was done from stone, as its name implies. Zinc, aluminum, monometal, and stainless steel are now utilized for this purpose. Lithography is based on the principle that water and grease will not mix. By use of the photographic principle, it is now possible to get an intaglio image, a planographic image, and a relief image. Most lithographic work today is run on offset presses, and a great proportion of it is from planographic images. Both sides of the paper can be printed simultaneously.

Rotogravure is printing from a copper cylinder in which the design is etched. There are numerous other printing methods, such as, steel die embossing, collotype or heliotype processes, etc. From postage stamps to posters as big as a house, floor coverings, wall paper, cloth and other fabrics, even bottles and jars used by dairies get their color, beauty, and sales values from the printing press.

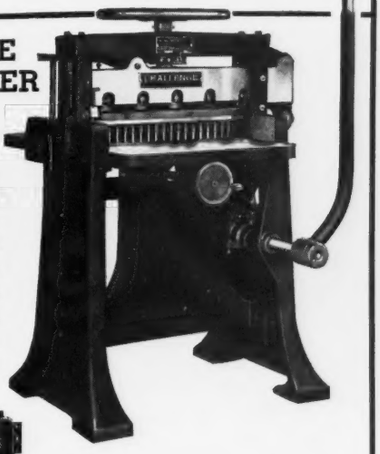
There are presses for color work that can reproduce a Rembrandt masterpiece in many thousands of copies an hour. What is claimed to be the biggest and fastest two-color magazine press in the world is approximately one-fifth of a block long and almost two stories high. It can print 2,000,000 pages in two colors per hour. Experts of the Goss Printing Press Company labored for more than half a year designing and building this press. The Crowell-Collier Publishing Company, Springfield, Ohio, employ a schedule in which it is required that 1,000,000 complete magazines be printed on its presses every working day.

*Economize with....*

**CHALLENGE EQUIPMENT**

**CHALLENGE LEVER PAPER CUTTERS**

Made in two sizes, 26½ and 30½-inch, these powerful lever cutters reduce physical effort and insure economy. The table is supported by a solid center piece—no sag—last sheet cuts every time.



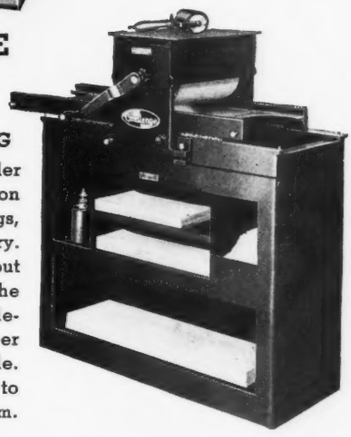
**CHALLENGE POWER INK DISTRIBUTOR**

Every print shop needs one! Saves time . . . makes it easy to ink hand rollers. You simply set a roller on the revolving metal cylinders, and in a jiffy it's uniformly inked. Unit is motor powered. Made in 10 and 20-inch sizes. Stand optional.

**CHALLENGE PROOF PRESSES**

**SERIES C and CG**

Built like a cylinder press—bed rolls on anti-friction bearings, cylinder is stationary. Two styles: C, without grippers; CG, with the Challenge register device with bed gripper and adjustable guide. Sizes from 12x18 to full newspaper form.



**CHALLENGE HI-SPEED QUOINS**

Two do the work of 5 to 8 ordinary quoins. Operated by one turn of key, self-locking, cannot slip. Made of cadmium plated steel, each one a self-contained unit. Six handy sizes. ● Write for further data on above items.

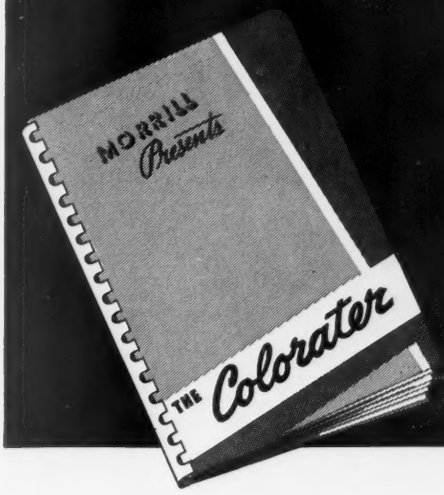
**The Challenge Machinery Co.**

GRAND HAVEN, MICHIGAN 339

CHICAGO, 17 E. Hubbard St. 200 Hudson St., NEW YORK



**An Encyclopedia of Printing Inks**




You asked for it—and we are giving it to you—gratis! It is not only unique, but the most complete color and ink selection guide ever compiled. Ingeniously designed and attractively printed, the Morrill Colorater offers a wealth of valuable and helpful information.

The Colorater, in seven sections, covers job and Commercial colors, Bond Inks, Dullset Inks, Sil-Vor Plate, Process Colors, Morr-Glos Inks and Poster Inks. Each ink is shown on the type of stock for which it is intended.

Write immediately on company stationery for your copy, as we cannot guarantee unlimited distribution.

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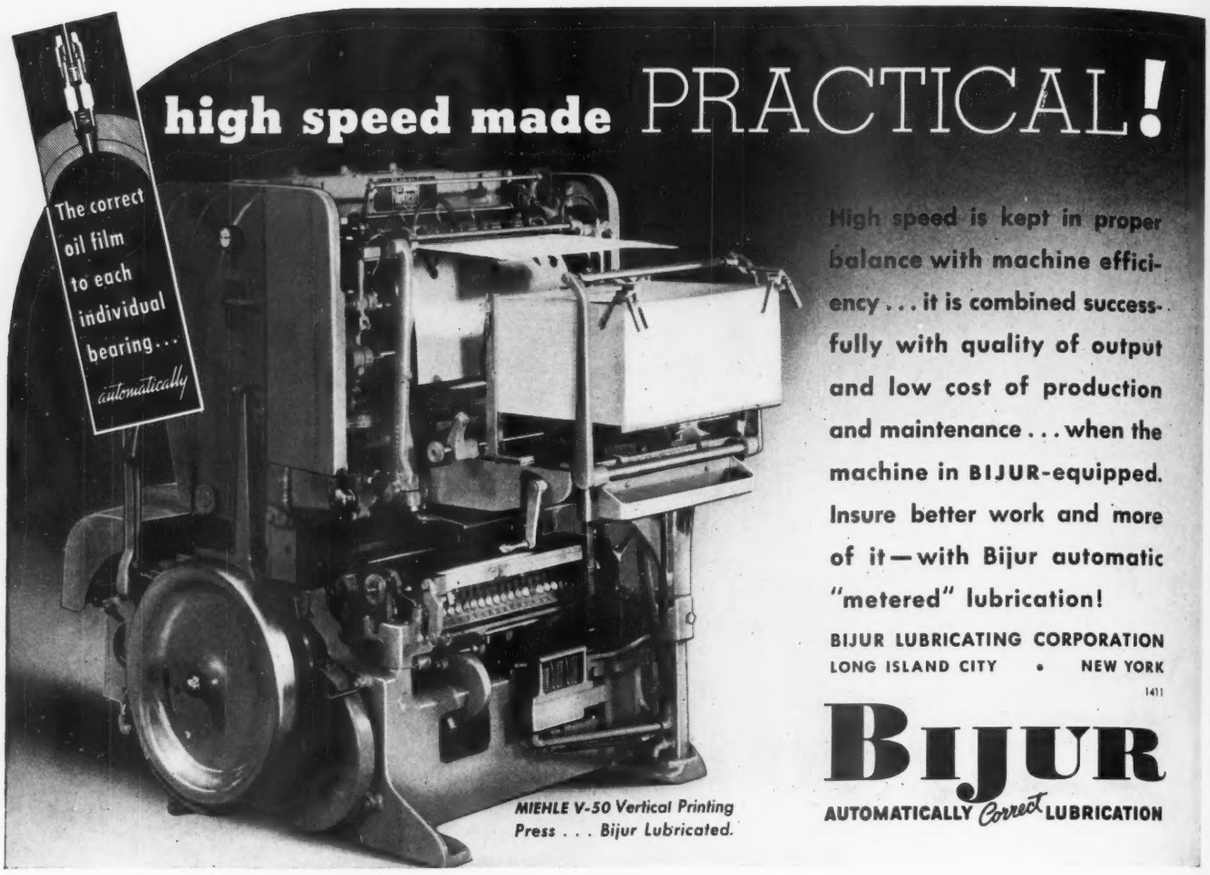
high speed made PRACTICAL!
The correct oil film to each individual bearing... automatically
MIEHLE V-50 Vertical Printing Press . . . Bijur Lubricated.
High speed is kept in proper balance with machine efficiency . . . it is combined successfully with quality of output and low cost of production and maintenance . . . when the machine in BIJUR-equipped. Insure better work and more of it—with Bijur automatic "metered" lubrication!
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### *Newspaper Printing*

Curved stereotype plates, fastened to press cylinders revolving at high speed, produce millions of copies of newspapers daily. Such presses are usually installed in multiple units to meet the publication's circulation requirements. The hourly output depends on the number of stereotype pages that can be put on each cylinder, the number of cylinders in the press, and the speed of operation. One of the very latest presses of this type is claimed to have a running speed of 60,000 copies an hour.

On September 25, 1690, the first newspaper in America was published in Boston. It consisted of 4 pages, 7½ by 11½ in., 2 columns to a page, called *Publick Occurrences Both Foreign and Domestick*. It was suppressed after the first issue. The only copy extant is in the *Public Record* office in London. In 1704 the *Boston News Letter* began publication. Now one newspaper in New York has a daily circulation of more than 1,880,000 and a Sunday circulation of 3,380,000.

### *Ink Making*

Ink making is an exact science. Research departments of ink makers determine the proper inks for various grades of paper and for other material and methods of printing. Recently, *The Chicago Tribune* printed a full-page florist advertisement in colors with perfumed ink. One American ink manufacturer, in business for more than 150 years, advertises that he has more than 30,000 active ink formulas for commercial, publication, news, carton, and bag printers.

Highly volatile vehicle inks have been developed for fast rotary magazine printing. The paper, passing through gas flames, consumes the vehicle and dries the pigment instantly upon the paper.

While one ink maker visualizes ink in solid brick form, another announces a "cold set" ink that is practically solid in its natural state. It requires the application of heat, of approximately 200 deg. F., to the ink fountain, metal roller, and plate cylinder, to render it fluid enough to print. It hardens instantly when it touches the comparatively cool paper. There are nearly 200 concerns in the United States making printing ink.

### *Industry Ranks Sixth*

Today the graphic arts industry ranks sixth in the United States. According to the *American Printer*, it is estimated there are between 35,000 and 40,000 printing plants in America.

The greatest progress in the printing industry has been made during the past 100 years or so. The making of printing machinery and equipment is a highly competitive field and advances accordingly. Electricity, photography, and temperature and humidity control are contributing to technical advancements in the graphic arts.

### *Variety In Rollers*

The old ink balls have long been replaced by smooth ink rollers which are made in a great variety of lengths and diameters for the various presses in use. There are offset, rubber, graining, composition, rotogravure, non-meltable, fabric covered, varnish and lacquer rollers, etc.

### *Paper*

In 1772 a German published a work containing sixty specimens of paper made from different vegetable substances. The *Printing Equipment Engineer*, 1940 Reference Number (December, 1939), lists about 450 names and kinds of paper in alphabetical order. Research has brought remarkable results to the paper makers.

### *Facsimile Newspaper*

In 1939, at the spring meeting of the Southern Illinois Editorial Association, a demonstration of facsimile newspaper broadcasting was sponsored by the *St. Louis Post-Dispatch*. The radio edition of that publication was displayed, together with the latest facsimile newspaper receiver, which operates by radio and "prints" a newspaper right in the subscriber's own home.

## *"A Rush is All Right Now, With Certifieds,"*

**SAYS the Foreman. "Nobody can kick if the extras and makeovers come thick and fast . . . Stereo departments are organized for peak effort . . . It's all a part of the game . . . But if anyone can organize for mat troubles, I wish they would tell me how . . . Since we switched to Certifieds and got rid of doubtful plates, remolds, recasts and patching, you can't find a peppier bunch anywhere than we have right here in this department . . . Yes, that change to Certifieds helped a lot."**

*For dependable stereotyping, rely on Certified Mats, made in the U.S.A.*

**Certified Dry Mat Corporation**

**9 Rockefeller Plaza, Dept. M, New York, N. Y.**

Certified DRY MATS



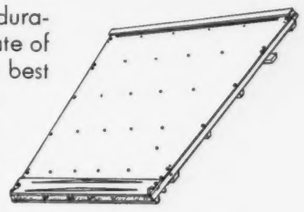
## NOW . . The Largest Independent Manufacturer of Composing Machine Parts and Accessories . .

With the purchase of the typesetting machine parts business of Reid Brothers, Beverly, Mass., Montgomery and Bacon become the largest independent manufacturers of composing machine parts and accessories.

The combining of the machinery and stock of these two companies necessitates the building of an addition to our just recently completed plant. We are now in a position to supply your needs of parts, repairs and accessories. May we call your attention to our —

### Improved Magazines for Linotypes

Using top plate of duralumin and bottom plate of brass we combine best features of previous designs. Sold on guarantee of satisfaction of course. For use on models 4, 5, 8, 14, L, 18, 19, 24, 25, 30.



**Only $16.50 Down, Balance $10 per Month**

On this basis magazine pays for itself through increased output of machine and time saved by operator in changing fonts.

Ask for large free catalog of other bargains in typesetting machine equipment and repairs.

### LINOTYPE — INTERTYPE
### *Replacement Parts*

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|---|---|---|---|
| New Molds, universal and adv. fig. style | $ 55.00 | Back Knives | $ 2.00 |
| Back Jaws | 10.00 | Side Knives, set | 13.00 |
| Gross Assorted Screws | 1.50 | Plungers | 4.00 |
| Spacebands | .75 | Dis. Box Bars | 4.50 |
| Liners, solid style | 1.00 | Sec. El. Bars | 6.40 |
| Rubber Rolls for Keyboard | .60 | Vise Locking Screws | 3.00 |
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| Transfer Fingers, Improved | .50 | Assembler Fibre Buffers | .10 |
| | | Watch Oil for Keyboard Cams | .50 |
| | | First El. Spring Pawls | .07 |
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### REBUILT MATERIAL

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|---|---|---|---|
| Rebuilt Molds (uni. and adv. fig.) ($10 allowance for old) | $ 35.00 | Rebuilt Margach Type Feeders | $ 55.00 |
| Rebuilt Mold Disks ($5.00 allowance for old) | 35.00 | Rebuilt Back Jaws | 5.50 |
| Rebuilt Electric Pots | 150.00 | Rebuilt Sec. El. Bars | 4.00 |
| Rebuilt Monomelts | 150.00 | Rebuilt Dis. Box Bars | 2.50 |
| Rebuilt Gas Pots | 85.00 | Reground Back Knives | 1.25 |
| | | Reground Side Knives, set | 10.00 |

### REPAIRS

| | | | |
|---|---|---|---|
| Rebuilding Magazines | $25-40 | Regrinding Side Knives, set | $ 2.50 |
| Rebuilding uni. and adv. fig. molds | 25.00 | Rebuilding Back Jaws | 4.50 |
| Regrinding Back Knives | .75 | Rebuilding Sec. El. Bars | 3.50 |
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### FONTS

Over 300 always in stock. Write for list and proofs. We buy, sell and trade in all kinds of Linotype and Intertype parts.

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**With cash order of $10.00 or more mentioning this advertisement and offer.**

**MONTGOMERY & BACON**

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*For Linotype*

Matrix Delivery Belts . . .
Space Bands . . Liners

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Superior Gummed Packing
Felt, Sheets or Strips . . .

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Superior Tail Boards . . .
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Steel Pouring Sheets . . .
Breaking Pins . . . Belts

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**FORM-O-SCORCH**

ELECTRIC MATRIX SCORCHER

For Flat, Curved or Tubular Mats

*write for catalog*

American Publishers Supply

BOX 131 • WEST LYNN, MASS.


## TROUBLE LAMP

*(Continued from Page 81)*

to move the machines at some future time. The troughs also provide a means for keeping the floor clear of encumbrances in the way of exposed conduits or pipes.

The manner of mounting the service trough is shown in the accompanying illustration. In this particular case, the vertical conduit carries the wires for the electrically-heated metal pots. The machinist's signal light (red) is shown by the short vertical drop fixture at the right of the metal pot conduit.

A distributor trouble lamp is provided by Chief Composing Room Machinist Tommy Carter by puncturing the bottom of the trough and inserting the necessary nipple, elbow, flexible "goose neck" tubing and socket in which the wires are carried.

Another fixture which is appreciated by Mr. Carter's machinist force consists of a pig rack mounted on the main frame at the side of the machine. This rack is constructed of welded steel bar. A hooked support welded to the rack frame provides a means for suspending the rack.

In commenting upon the rack, Composing Room Superintendent Wilford Coddington stated "We like to keep our floor clear. In addition, the rack saves time and encourages the machinists to keep the feeders supplied with metal at all times."

## *Importance of Paper Cutting Machine Stick*

THE wood stick that snugly fits the slot in the table of the paper cutting machine is seldom seen because the wood although seasoned is subject to variations of humidity. A stick that is too large is a nuisance so they are generally received a trifle scant and as they are bought by the dozen and often stored in a dry, warm room, shrinkage is to be expected. The result is that when the stick is placed in the slot it is lower than the table of the cutter and noticeably so to the operator's eye and he naturally shims up the stick. Right here discretion is called for.

If the stick is carried higher than the table, the descending clamp meets the stick and is prevented from snugly clamping the lift of paper on the table. The bulge upward caused in the bottom of the pile next to the stick results in sheets of varying size from the cut. On the other hand, if the stick is lower than the table to a slight extent, say 0.003-in., the clamp will hold the bottom of the lift firmly on the table instead of the stick, which is necessary else the knife would draw the stock toward any low spot in the wood stick and cause variation in the size of the sheets in the lift.

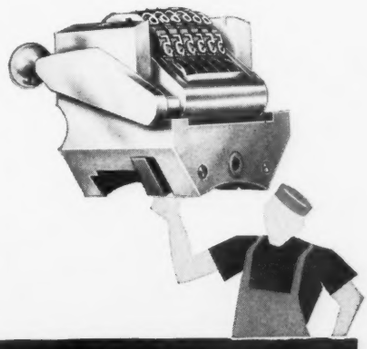
# ROTARY PRESSES

*Equipped with*

WETTER

*Number Better*

Locking time is reduced and fine adjustment is facilitated by exclusive features of Wetter Rotary Numbering Machines. Interchangeable, too, for right angle or parallel operation. Deeply engraved figures, accurately turned to cylinder sizes, insure better work.



WETTER NUMBERING MACHINE CO.
246 LOGAN STREET, BROOKLYN, NEW YORK

## Photo-Engraving Equipment, Machinery

ENGRAVERS SUPPLIES

Copper and Zinc

E. T. SULLEBARGER CO.
110 Fulton Street, New York
538 S. Clark Street, Chicago

*Who Makes It?...*

**Consult P-E-E 1940 Reference Issue (Dec.)**

## I'm Glad the Boss Bought a CHALLENGE PAPER DRILL

● Says the operator: ..."I like the Challenge, because it's so easy to operate, so simple to adjust. I can do a good day's work without being all tired out. The black, no-glare table top and Flexolite illumination prevent eye strain, too. It's really a very fine machine!"

## I'm Glad I Did *too!*

● Says the owner: "Our Challenge Drill sure is a money-maker. It turns out a lot of work at low cost and *accurately!* That means quality jobs at the right price for our customers and plenty of profitable business for us. It's a good investment."

Owners and operators everywhere agree on the value of the Challenge Paper Drill. It's made in 7 models—a size and style for every requirement — from a hand-operated bench model up to the electro-hydraulic power units. All are available with slotting and cornering facilities. Mail coupon for full details.

**THE CHALLENGE MACHINERY COMPANY**
GRAND HAVEN, MICHIGAN

CHICAGO, 17-19 E. Hubbard St. — Challenge 376 — NEW YORK, 200 Hudson Street

## *FREE* Drill Catalog!

Without obligation, send illustrated catalog, giving full details on Challenge Paper Drilling Machines.

*NAME*_____

*FULL ADDRESS*_____

# Knox Tells Printers

## *that Planning Standards will reduce Printing Costs and Check Profit Losses — Basic improvement in industry dependent upon coordination*

"BECAUSE printed matter is not planned according to standards, the printing industry is one of the most wasteful of all major industries—wasteful in that it robs the printer of profit as well as costing the advertiser too much for the printed piece", said Frank M. Knox, President of the Frank M. Knox Company, New York, in an address delivered before a number of Graphic Arts associations recently.

"The profit earned by the American printing industry as a whole in 1938 was 1.23%", said Mr. Knox. "One reason for this low earning power is that the printer is the only manufacturer who does not control the planning of the product he manufactures. The inevitable result is waste and inefficiency all along the line.

"The extent of this waste was disclosed by the survey on the efficiency of printing production made last summer by the Direct Mail Advertisers Association. This survey proved, by a study of printers' production sheets, that waste of some kind was involved in producing 72% of the 341 printed pieces examined."

The reason for this waste is clear, Mr. Knox pointed out. Printed matter is planned by people who are not thoroughly familiar with all the technicalities of printing. The advertiser pays for this waste in higher costs; the printer pays for it in smaller profits and reduced production.

"Coordination between planning and manufacturing is a fundamental requirement for efficiency and economy in any manufacturing industry and it simply does not exist in the printing industry," Mr. Knox said. "Studies of cost and production control inside the printing plant are good and necessary, but no basic improvement will ever be made in the printing industry until some sort of coordination is established between the planning of dummies and their manufacture by the printer.

"This coordination can be brought about by the general adoption of planning standards for printed matter, which would ensure efficient production and eliminate avoidable waste. The printer should foster the adoption of such standards."

### *William Kirby Holmes*

With the death of William Kirby Holmes on April 13, the photo-engraving industry lost one of its most colorful figures. In 1880, at the age of 15, he became indentured to Crosscup & West as an apprentice wood engraver — probably one of the last in the country to be indentured.

Following some experience in other shops, he was employed in the Engraving Division at the Curtis plant in July, 1899. That was his last change of employers, and he remained as an active member of the Curtis organization until the time of his death.

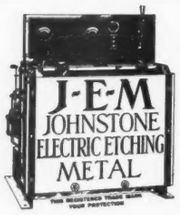
In his new job, Kirby Holmes found plenty of opportunity for his skill and talent. Halftone plates then were given only a shallow etch, and were printed on heavy coated stock. They were not considered practical for such "light" papers as 75-90 lb. stocks. Mr. Holmes found that by re-engraving his plates, he improved their printability and made them better suited for lighter weight paper. His work was so satisfactory to Mr. Bok and Mr. Curtis that when *The Saturday Evening Post* inaugurated a series of two-color covers, to appear every other week, he was assigned the preparation of the plates. The covers became the outstanding two-color illustrations of their day, and people marvelled at the pleasing effects obtained.

At this time, all color work, whether


**Visit**

**Booths 38 & 40 at ANPA Mechanical Conference**

***and see the***

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*Ask About . . .*

**Jem Metal**

**Silvertone Zinc** **Silvertone Copper**

**Chemicals**

**and Latest Engravers Equipment**

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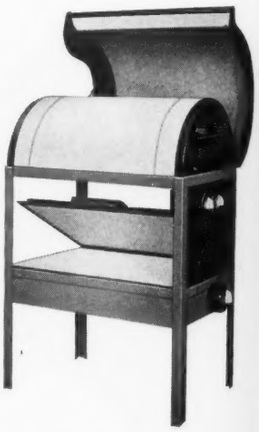
PLATE MAKERS EQUIPMENT · SUPPLIES

538 SOUTH CLARK ST.
**JOHNSTONE ELECTRIC CO., INC.**
CHICAGO, ILLINOIS

***Combination***

**FLAT and CURVED**

**SCORCHER**



A combined flat and curved Speed Scorcher centralizes your scorching operations into one compact, efficient unit. Why invest in two machines? Why waste floor space taken up by two separate scorchers? The Speed combination scorcher answers these questions.

**FEATURES**

- Quick access to heaters.
- Full floating cover on curved scorcher.
- Uniform heat distribution.
- Maximum input of 3000 watts in curved scorcher.
- Maximum input of 2250 watts in flat scorcher.

*For full information write us today*

**SPEED PRODUCTS, INC.**
**437 E. 106th Street** **Cleveland, Ohio**

# Robertson Equipment

cameras
lenses
lights
screens
etching machines
vacuum frames
temperature controls
plate whirlers
diaphragm controls

•

*Write today for your circular describing our new diaphragm control.. no obligation*

•

**R. R. ROBERTSON**
400 W. Madison St., Chicago, Ill.

*See it in operation at the A.N.P.A. Convention.*

# The Jordan CONTINUOUS METAL FEEDER

**For the LINOTYPE--INTERTYPE MONOTYPE--LUDLOW--ELROD**

**OPERATES EFFICIENTLY WITH ALL TYPES OF HANGING INGOTS**

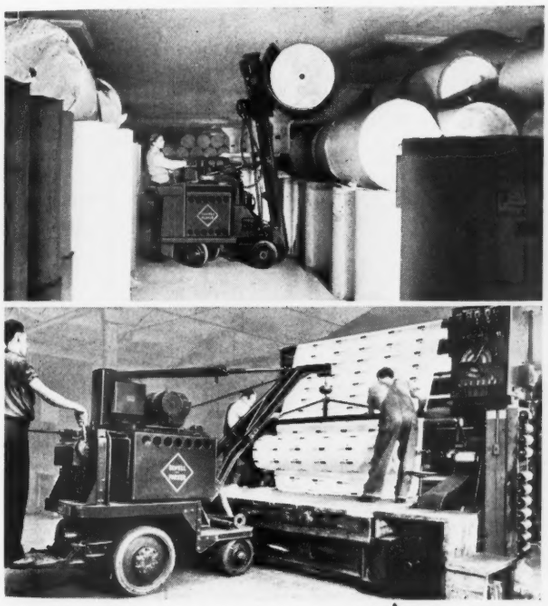
**A self-actuating feeder. No need to pull back the chain whenever a new pig of metal is to be attached. Pigs do not overlap, therefore can not jam in the metal-pot. Pigs feed down in exact amount of metal cast regardless of whether light or heavy slugs are being cast. Pig will not drop suddenly to bottom of pot as sometimes occurs with old-style feeders.**

***Tell us the type of machine on which you want to install continuous feeding and we will ship you a Jordan Feeder with the proper support, ready to be attached in a few minutes by your machinist or operator. The price, including support . . . . . $75.***

**UNITED AMERICAN METALS CORP'N**
200 Diamond St., Brooklyn, N.Y. 2246 W. Hubbard St., Chicago, Ill.
4101 Curtis Ave., Baltimore, Md. 785 Bryant St., San Francisco, Cal.

as fine a type metal as is made
**UNITED AMERICAN**





# DARE US TO PROVE

**that your paper-handling costs can be reduced sharply—*permanently!***

**THE ELWELL-PARKER ELECTRIC CO.**
4517 St. Clair Avenue Cleveland, Ohio

**ELWELL-PARKER *Power Industrial* TRUCKS**
ESTABLISHED 1893 ... BUILDING POWER INDUSTRIAL TRUCKS SINCE 1906

LUBRICATED FOR LIFE
LARGE OR SMALL
There is a PULSOLATOR system for automatically lubricating every type and size of printing press.
Customers write that Pulsolator
"Increases press productive time 3-3%"
and
"Reduces oil consumption 60%"
At your request our engineer will call and demonstrate how Pulsolator obtains these savings.
Write for Bulletin B-30
RIVETT LATHE & GRINDER INC.
Brighton, Boston, Mass.
Automatic oil lubrication
BLANCHARD PULSOLATOR

**to better printing**

We honestly believe that FLEX dry mats will reproduce type and halftones better than any other dry mat on the market. FLEX dry mat USERS think so, too . . . but PROOF is what counts!

So we invite you to send for free samples of FLEX dry mats and try them for yourself. We are sure that you will like them; but whether you do or not there's no obligation of any kind. Please specify gauge, shrink, and the type of casting equipment you are using.

**FLEXIDEAL DRY MAT CORPORATION**

21 West Street
New York

**FLEX**
All-American
**DRY MATS**



***Every Plant Needs Them***

TRY THE SENSATIONAL NEW

***Zephyr* BLACKS**

**These inks represent a complete new chemical achievement. Based on the principle of polymerization, they are unlike any other product on the market.**

- **SET *in 60 seconds.***
- **BACK UP *in 30 minutes.***
- **BONE DRY *in an hour.***
- **ZEPHYR BLACKS *are perfected in three grades.* Available for practically any job.**

***Try Them Out.*** **For folder, or trial order,**

**WRITE - WIRE - PHONE**

***Now in use from Coast to Coast***

**Sinclair & Valentine Co.**

**INKS** MAIN OFFICE AND FACTORY

**611 West 129th Street, New York, N. Y.**

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|---|---|---|---|
| Albany | Cleveland | Kansas City | New Orleans |
| Baltimore | Dallas | Los Angeles | Philadelphia |
| Birmingham | Dayton | Manila | San Francisco |
| Boston | Havana | Nashville | Seattle |
| Chicago | Jacksonville | New Haven | |


done in two, three, or four colors, was printed dry. Curtis pioneering finally developed the wet-printing process for four-color work, and in 1909 this revolutionary process was put into regular production. This introduced new problems for Mr. Holmes, who had become Manager of the Engraving Division. Mr. Holmes found himself with a big teaching job on his hands. This educational work extending over many years, was probably the most outstanding of Mr. Holmes' many contributions to the engraving art.

With the tremendous expansion in the volume of color advertising carried by the Curtis magazines, and with plates being furnished by engravers all over the United States, Mr. Holmes became recognized as a leading authority in his field.

As magazine circulations increased, the engraving became less important as a direct printing medium. As the electrotypers advanced their own art, they set new standards for engravings. Mr. Holmes interpreted these requirements to the engravers of the country, and continued to show them how their halftones should be made to insure the finest possible reproduction.

## HUMAN ELEMENT

(*Continued from Page 35*)

Times and terms change. Perhaps nowadays anything in which human beings are interested could be classed in the category of changes. So many things that have suffered from being done under long-set rules are being done today under a new and admittedly better set of rules. And these rules are continually changing. It sometimes becomes necessary for a composing room executive to forget his specific problems for a while and become interested in the new ideas that are continually confronting the newspaper business. Unless we remove ourselves from horse-and-buggy-day thinking, we shall find it difficult to approach the new way and our progress will thus be retarded. I do not want to say that we should be indifferent to the

The 1940 P-Double-E Reference Issue with the 64-page goldenrod paper section contains revised and up-to-date indexes for printing equipment and supplies. Use the index freely to locate manufacturers of and dealers in equipment and supplies.


**A new book for Printing Executives as well as for photo-engravers — platemakers — ink manufacturer — chemist — papermaker and others in the allied crafts**

# PRINTING INKS

## Their Chemistry and Technology

**By CARLETON ELLIS**
*Industrial Research Chemist*

Important technological changes in the printing processes (familiar to every printing executive) have created exacting new requirements for inks which chemical research has been actively endeavoring to satisfy. In turn, the solving of new production problems brought about by technological improvements, both in equipment and inks, has created the urgent need for a useful book. In preparing this treatise the author has stayed close to the printing plant.

Table of Contents — Introduction: History of Printing Inks; Printing Ink Vehicles; Driers; Printing Ink Modifiers; Pigments; Typographic Inks — Drying-oil Types; Typographic Inks — Mineral-oil and Quick-drying; Planographic Inks; Intaglio Inks; Photomechanical Preparation of Matrices; Transfer Inks; Emulsion Inks; Special Types of Printing Inks; Printing Inks for Miscellaneous Purposes; Printing Ink Problems; The Testing of Printing Inks; Paper for Printing; Glossary Indexes.

Bound in cloth, 6 in. by 9½ in., 560 pages, well illustrated. Price $7.00 per copy, cash with order.

**PRINTING EQUIPMENT ENGINEER • 1276 West Third Street • Cleveland, Ohio**

*Switch to*

**WOOD DRY MATS**

**FOR**

**A REVELATION IN REPRODUCTION!**

★ Solid Blacks
★ White Highlights
★ Brilliant Halftones

*it's the MAT that has EVERYTHING!*

Every craftsman who takes pride in clean-cut printing, rich solids, delicately graded tonal values, blazing highlights... will appreciate the performance of Wood Dry Mats. Made by men who know the problems of stereotypers and pressmen, Wood Mats lead in popularity and perfection.

SAMPLE LOT FOR TESTING SENT UPON REQUEST.

WOOD DRY MATS

*Always Uniform*

**WOOD FLONG CORPORATION**

HOOSICK FALLS
NEW YORK

• • • stands for Craftsmen
Big printers and small
Who all cheer for KIMBLES
The best of them all.

*Motors by* KIMBLE

*Distributed by AMERICAN TYPE FOUNDERS*

*Branches and Sales Agents in 25 Cities*

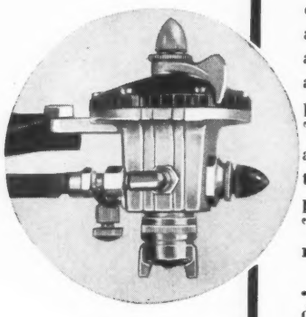
**WHILE IN CHICAGO VISIT OUR NEW HOME**

CONVENTIONEERS attending the A.N.P.A. Mechanical Conference are cordially invited to inspect our new plant to see the grinding and polishing of photo-engravers' metals. Any questions regarding Photo-engraving equipment, supplies or problems can be discussed with our representatives at Booth number 60.

**NATIONAL STEEL & COPPER PLATE CO.**

CHICAGO NEW YORK

# Printers Talk about the New ATF Diafram Gun...



"Production has increased to such an extent our ATF Gun will pay for itself in less than six months."... "On four-color high gloss ink process, overprint varnish and metallic ink runs, your ATF Guns have come through and helped speed up production considerably."... "Big help on heavy halftones and Process work."... "Our ATF Guns have enhanced the quality of our work and increased production appreciably on solids, high gloss ink and four-color process work... all on gummed stock, too."... "Full color at maximum speeds." "Bought another ATF Gun—hope to add still another."... "We are finishing a high gloss ink job of 320,000 impressions and simply could not have done this job without our ATF Guns."... "Our ATF Gun saves delays, increases our production and insures prompt delivery... will pay for itself in eight months." "Color jobs run at full speed of the presses without any offsetting, sticking or reducing color."... "Enables us to print and back up our jobs much faster."

***... and we'll just add a suggestion...*** ask your ATF Salesman for a demonstration of what the new ATF Gun can do for you... or write

**AMERICAN TYPE FOUNDERS**

**200 Elmora Avenue, Elizabeth, N. J. • *Branches in 23 Principal Cities***

Types used: Phenix and Bodoni Family


many set and established rules. What I am trying to say is that we should approach the new problems with open minds in order to find new and better ways of producing the composition for a newspaper.

A dispatch from the Finn-Russian War early this year showed how well men still count. Finns, springing from places of concealment onto tops of Russian tanks and prying tops off turrets, revealed that machines have not destroyed the value or resourcefulness of men in war. The same may be said regarding the personnel of a composing room where the human element is given consideration. The new machine, modern and perhaps perfect, will do no more than operate under the guidance of the operator.

We may term a new idea illogical, vicious, discriminatory and even lousy—but give it a little time and when it proves successful you can busy yourself transferring these adjectives to the opposition, even if you happened to be one of that number. All the philosophy that is brought to bear on the problem; all the exceptions which prove the rule, don't change the fact that consideration of the human element is a major enterprise in the production of a newspaper.

We are making up more pages and using a style of makeup which is certainly more diffcult, but we have not increased the force to achieve this. When the human element has careful consideration it is also possible to increase line-composing machine production and ad room production.

The trend toward magazine style in our papers has increased our difficulties both in composition and makeup, but we have met every desire of our publisher to publish a better newspaper by finding a way to do it with present equipment and personnel. Of course, the answer is that we devote much of our thought to our personnel and when we find a way to make a man better satisfied on the job we have found the solution to our problems of production.

Our publisher stands squarely behind us in our efforts. Granting vacations with pay, life insurance, home owners' insurance, accident insurance and retirement insurance without cost to us and liberal yearly bonuses. A Credit Union and hospitalization insurance at a low rate are among the things our publisher approves. All of these things make it possible for us to consider ourselves and the men working under us a part of the organization, not merely employee thereof.

Where the incentive to work exists and the desire to create is encouraged, there is really no way that I know of to keep men, under the right direction, from producing a good newspaper at a low cost.

When a composing room executive has every man on his force thinking as well as producing, he generally has a continuous flow of new ideas, and when he spends more and more time trying out new ideas, he soon finds himself surrounded with a force of producing men. Thus his costs are kept within bounds while the publisher is changing the paper from an old-time, every-day newspaper to a modern metropolitan daily that has an ever increasing circulation appeal.

**Mechanical Executive** is scratching his head. "Lemme see," says he, "Who makes Roscolene?" Mechanical Executive turns to page 165 of the new P-Double-E Trade Name Index and finds the answer. Simple, isn't it? Just 1058 trade names of printing equipment and supplies items and 420 paper trade names are listed in this new index. Use it freely.

## BEAUTIFUL BUILDING

(*Continued from Page 54*)

office and the circulation department, and to the west, the advertising department. From the main lobby, stairs will lead to a second floor lobby, news room, president's office, managing editor's office, and library. The entire third floor will be used as a staff meeting room.

The one-story rear section of the building will contain the mechanical department, composing room, stereotype de-

# WILD & STEVENS, INC.

## *Printers' Rollers*

**5 PURCHASE ST., BOSTON, MASS.**

Every Type of Printing Roller a Printer Needs

# PITMAN

## Engravers' Supplies

**Zinc** **Copper**

**Equipment** **Chemicals**

**Special Processes**

*Serving the Photo-Engraving Industry Since 1906*

*Representatives at A.N.P.A. Conference*

GUS CARLSON ROY SMITH

AL MEYER FRED BARKER

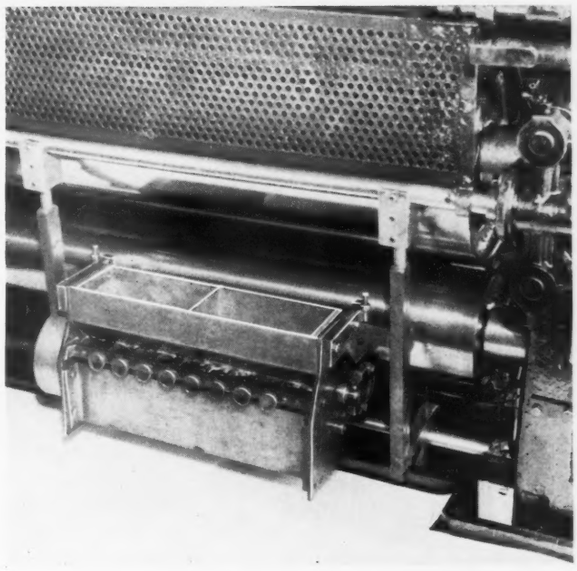
Ask our representatives about the new processes for making better newspaper engravings. They will be pleased to discuss any engraving problems with you.

## Harold M. Pitman Co.

**Chicago**
**51st Ave. and 33rd St.**

**New York**
**441 Lexington Ave.**

# *Color* RUNS MADE EASY



**THE RIORDAN FRICTION DRIVE COLOR FOUNTAIN**

Will be on display at the A.N.P.A. in Chicago.

*Agents*

**WALTER SCOTT CO.**
**Plainfield, N. J.**

**S. A. ROLLER WORKS**
**San Antonio, Texas**

# APPROVED *by* GOSS

ONE OF THE WORLD'S LARGEST MANUFACTURERS OF ROTARY PRINTING PRESSES

*". . . . having been advised that your press gear lubricant has performed satisfactorily on the gear faces of a number of our presses, we will be glad to place it on our approved list."*

*W. T. Goss - The Goss Printing Press Co.*

**SOVEREIGN PRESS GEAR LUBRICANT is a NEW DEVELOPMENT that will give MORE PROTECTION to your press gears than any lubricant you have ever used . . . BECAUSE . . .**

- **It has an extremely high melting point.**
- **It clings to gears at highest speeds.**
- **It is 100% lubrication - No chemicals used.**

**FREE! A LIBERAL SAMPLE - USE CARD AT THE BACK OF MAGAZINE!**

**SOVEREIGN OIL COMPANY · CHICAGO, U. S. A.**

Visit our exhibit at the ANPA Mechanical Convention in Chicago - June 10th, 11th and 12th, 1940

▪ *N Y World Telegram · Beaumont Enterprise* ▪
▪ *Journal · Rochester Times Union · Houston Press* ▪
▪ *Royal Oak Tribune · Youngstown Vindicator* ▪

**JAMES WILLIAM THOMAS**
*Printing Plant Architecture & Engineering*
*3868 Carnegie Ave., Cleveland, Ohio*

▪ *Cleveland Press · Newark Advocate · Brooklyn* ▪
▪ *Eagle · Akron Times Press · Pittsburgh Press* ▪
▪ *Beacon News · Bloomington Daily Pantagraph* ▪
▪ *Utica Observer Dispatch · Rein Publishing Co.* ▪
▪ *Ironwood Daily Globe* ▪

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

Circular on New Cabinet Model
FREE Rouse BAND SAW
See the No. 2 Rouse Band Saw for smaller plants.
H. B. ROUSE & CO.
2216 N. Wayne Ave., Chicago, Ill.

**PRESS BLANKETS**
Tailored to fit the press and printing requirements. Cork, oil-proof synthetic rubber or combination for newspaper, magazine or job work, any press .022 to .151 gauge. . . .
*Guaranteed for service; will not mat, stretch or creep.*
ACME PRESS BLANKET CO., 162 North Wells Street, Chicago

partment, press, mailing department, and carrier boys' room.

In the basement, at the front of the building, accessible by a stairway from the main lobby, will be the Scioto Gazette Print Shop. Also in the basement will be locker rooms, wash rooms and showers for the production department, the photo-engraving department, file room, paper storage, mechanical ventilating, heating and cooling equipment, press control, boiler room, ink storage, paper baling and newsboys meeting room.

An electric lift at the rear of the building will make it easy to bring raw materials, including newsprint, ink and other supplies, into a receiving room in the basement.

The high speed 24-page Duplex tubular press will be installed on special cork foundations which separate it from the building structure and eliminate all vibration. Job printing presses also will be installed on special cork foundations.

Paper rolls will be handled entirely by trucks running on narrow-gauge tracks set flush with the floor or depressed wherever the rolls are to be loaded or unloaded so that no lifting of paper by hand will be necessary. This same system of transportation will be used for handling heavy ink drums and baled paper.

Floors in the office areas will be of resilient asphalt tile, in the wash rooms of ceramic tile and in the production department of wood block flooring.

The lower part of wall surfaces in the lobby and all first floor offices will be of walnut, matching the counter, stairs and railings, with plaster above to the ceiling. The publisher's office will be paneled in walnut to the ceiling. In the production department, the lower part of the walls will be of glazed brick-tile with iron spot brick above to the ceiling.

All who have been associated in planning the new building feel that they have developed a plan with interior arrangements and appointments in keeping with the rapid developments which are taking place in mechanical equipment of buildings, and more particularly as applied to newspaper plants.

Neatly appointed offices for editors, department managers and executives, with ample facilities for the comfort and convenience of the public and proper working conditions for the production department are not considered luxuries but necessities if the building is to be really modern. These facilities will enable the entire staff to serve the public better, the aim and purpose in construction of the new building.

Contract for construction of the building was awarded to the Leo E. Ruisinger Construction Company, Columbus.

## FLUORESCENT

(*Continued from Page 52*)

development of a high power factor Tulamp ballast. Since then, however, a high power factor single-lamp ballast has become available. These ballasts contain a shunt compacitor which gives a power factor of 90% lagging or better at rated volts.

To correct the low power factor of some existing installations and single-lamp units, there are available compact capacitors for supplying the necessary leading current. Thus with a complete line of high power ballasts, plus capacitors for individual or group improvement of older installations, there is no reason for not having high power factor in all fluorescent lamp installations and thus get the most from the present wiring system.

### *Still In Its Infancy*

The fluorescent lamp is still in its infancy, yet it has opened new vistas in lighting. In using it the printer will find it to his advantage to (1) use only high power factor equipment, (2) use only replaceable-starter auxiliaries except in specialized cases, and (3) choose the proper lamp size and ballast to make up the most economical installation. High power factor equipment enables obtaining maximum utilization of the wiring system. The replaceable-starter system makes it practical to locate the ballasts at some distance from the lamps because two wires are eliminated which were formerly needed to connect auxiliaries with built-in switches. Economy is in part dependent on wattage and fluorescent lamps like filament lamps increase in efficiency as the wattage size is increased.

**Providing 75 footcandles on this composing room newspaper makeup table is really simplified lighting since the type rack serves as a trough reflector for a continuous line of Mazda F lamps.**

*Handle Benzine Safely • Reduce Waste Hazards*

with JUSTRITE SAFETY CANS • with JUSTRITE WASTE CANS

*Approved and Labeled by Underwriters' Laboratories, Inc.*

Sizes: 1 Pt. to 1 Gal. and 2, 3, 5 Gal. Sizes: 6, 8, 10, 14, 25 Gal. with foot lever

JUSTRITE MANUFACTURING COMPANY, 2093 Southport Avenue, Chicago, Illinois

DRAW SHEETS — *Better Things for Better Printing* — COATED CORK

**PRESS BLANKETS**

SATISFIED USERS

COATED CORK TOP BLANKET for SHARP PRINTING AND MILEAGE

*Pressroom Supplies*

**United Newspaper Supply Co.**

202 OAK STREET BELLMORE, N. Y.

**A CLEAN Plant is a PROFITABLE Plant**

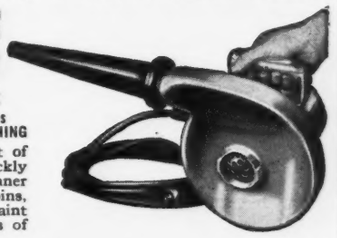
Keep your Plant clean with BREUER'S BALL BEARING

**TORNADO**

CONVERTIBLE ELECTRIC

**BLOWER** Cleans EVERYTHING

Blows dust and dirt out of motors and machinery. Quickly convertible into suction cleaner for type cases, storage bins, floors, walls, etc. Sprays paint and insecticide. Hundreds of uses.



**BREUER ELECTRIC MFG. CO.**

5114 N. Ravenswood Ave. CHICAGO, ILL.

TAKE THE DUST OUT OF INDUSTRY with BREUER'S BALL BEARING TORNADO PORTABLE ELECTRIC BLOWER

*Write for information and* FREE TRIAL OFFER

**AXEL HOLMSTROM**

**JUBILEE AND STANDARD ETCHING MACHINES**

Long Life Plain Construction Superior Results

Write for circular

328 Chestnut St. Philadelphia, Pa.

**ATTENTION STEREOTYPERS**

Hundreds of stereotypers are getting perfect molding and stereotype mats through the use of **Franklin Apex Combination Molder** and the **Franklin Klean-print Molding Blanket.** Write today and let us send you samples and complete information on these products.

**RUSSELL PRODUCTS COMPANY**

702 Harrison Building, 15th and Market Sts. Philadelphia, Pa.

HUMIDIFYING—COOLING—DRYING

**B. OFFEN & CO.**

608 So. Dearborn St., Chicago

*Write for illustrated pamphlets*

"AIR CONDITIONING AND HUMIDITY CONTROL"

**METALS**

Type, Stereotype and Electrotype Metals for the Trade

*Write for Prices and Information*

GARDINER METAL CO., 4820 So. Campbell Street, Chicago

Gardiner METAL CO.

**STOP OFFSET**

Get your free copy of this new bulletin—"10 Ways to Avoid Offset." Valuable—practical—shows how to save money—improve presswork.

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- Model E Elrod
- Duplex 8 Page Flat Bed Web Press
- 10 ft. Steel Newspaper Makeup Table
- Used Stereotype Chases
- Model 8 Linotype

*Write today*

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*"Your Supply House"*

ABRAMS POSITIVE SERVICE

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**SAVE** *on* **STEEL FURNITURE**

by buying your galleys, tables, and type cabinets at Angle Steel Stool Company.

- If you are paying high prices, give us a trial. We build what you want, at your own specification, at lower prices. Send for prices and details on —
- New mat packing table.
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*No. 20-12 Practical and Inexpensive Linotype Stand*

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# LATEST TECHNICAL LITERATURE *offered gratis by* ADVERTISERS . . .

●

*Use this Free Service—*

## • KEEP UP TO DATE ON EQUIPMENT and SUPPLIES!

Circle the numbers on the convenient postage-paid return card, supply your name, title and company address and mail — we do the rest. Manufacturer or supplier will send you information or literature about equipment or supplies advertised in this issue. This card saves you time and postage — Keep informed — No obligation.

---

**FILL OUT THE POSTAGE-PAID RETURN CARD**

## *Pressroom*

**1 GEAR LUBRICANT** — "Sovereign Press gear lubricant is a new development that gives more protection to your press gears. It is 100% lubricant — No chemicals." Sovereign Oil Company offers gratis a liberal sample.

**2 COLOR FOUNTAIN** — "Color runs are made easy with the Riordan Friction drive color Fountain." Circle this number on Post-card.

**3 INKS** — This number circled on post-card brings you gratis an ink 'Colorator' covering George H. Morrill Commercial inks. Send for it.

**4 LUBRICATION** — "Insure better work and more of it — with Bijur "metered" lubrication on your presses." Bijur offers to send information on its system.

**5 BEARINGS** — "Cartridge" Ball bearings, protect, save, and insure longer life for your equipment, states Norma - Hoffman Bearings Corp. Let them send you free descriptive catalog.

**6 NEWS INKS** — "Ask the Morrill Service Man to point out what Morrill Inks can do for your paper." Use the coupon — We will forward your request to Geo. H. Morrill Company.

**7 BEARINGS** — "Timken Tapered Roller Bearings eliminate friction, reduce wear to the vanishing point." Timken Roller Bearing Company offers interesting information.

**8 PASTERS, DRIVES, TENSIONS** — Want to learn more about Cline Electric Equipment? Circle this number on the post-card and mail. Cline will forward information to you. No obligation.

**9 ROLLERS** — Goodyear will be glad to send you booklet describing its rollers and Red Top underblankets. Use the postage-paid return card.

**10 NUMBERING MACHINES** — Wetter Numbering Machine Company wants to send you full details and description of its machines for use on Rotary and flat bed presses. Circle this number on the coupon.

**11 BEARINGS** — "SKF Bearings promote high speeds, low torque, accurate register through axial and radial rigidity." Let SKF give you free details on its press bearings.

**12 ROLLERS** — Let the Dayton Rubber Company send you details on its newspaper rollers. Learn more about "Daycos".

**13 PRESS PACKING** — New England Newspaper Supply wants to tell you about its complete line of packing combinations for quality printing. Coupon brings details.

**14 ROLLERS** — Particulars and recommendations on Vulcan Rollers and Blankets will be sent to you. Offered by the Vulcan Proofing Company.

**15 PRESS** — Circle this number on the post-card to receive data and booklet on Goss Units and Folders.

**16 INKS** — William C. Herrick Ink Company offers circular on its Newspaper Inks. Just fill out the coupon and mail. We do the rest. No obligation to you.

**17 ROLLERS** — Goodrich Rubber Company offers descriptive circular on its Printers Rollers. Send for it. Use the coupon.

**18 GRINDER & POLISHER** — Black Rock Mfg. Company will be glad to mail you literature on its Roller Grinder and polisher. Use the post-card.

**19 HOE** offers data on its pasters, folders, reels and tensions. Circle this number on the coupon to get latest information on Hoe equipment.

**20 PRESS** — ATF this month offers a five-color press sheet from the ATF No. 2 Kelly. Post-card brings it. Just circle this number and mail.

**21 PRINTING PRESS BLANKETS** — Tingue, Brown & Company enumerate the various kinds of press blankets supplied by them. Prices and samples will be sent to you. No obligation.

**22 PAPER** — "To get the most out of your printing, investigate Champion Paper, the foundation for good printing." Champion Paper & Fibre Co. offers information on its complete line of papers. Gratis.

**23 OFFSET GUN** — ATF offers complete information on its improved Gun.

**24 OFFSET PRESS** — "To produce the best in Offset, you must have modern equipment." Harris-Seybold-Potter Co. offers interesting reading matter on its press — also information on Harris Litho chemicals.

**25 INK** — "Zephyr Blacks, for flatbed presses, are favorites across the nation. Drying speed is amazing." Sinclair & Valentine offers descriptive folder. Send for it.

**26 PRESS** — ATF "Little Giant" press sheet and details on this press will be mailed to you. Just circle this number on the post-card.

**27 OFFSET EQUIPMENT** — Let American Type Founders send you details on its complete line of Offset equipment. "From the darkroom to the pressroom." No obligation.

**28 ROLLERS** — "Durability, concentricity, economical, easily washed." Rapid Roller Company offers information on "Tomorrow's Roller Today." Send for it.

**29 DUPLICATION PROCESS** — Quality Engraving & Electrotype Co. offers details on "method of making 10, 20 or 30 duplicate plates — locked and in perfect register."

**30 COLD SET INK** — J. M. Huber, Inc., offers to send you specimens of Velo Cold Set rotary press printing. Check up on this revolutionary new ink. No obligation.

**31 ROLLERS** — "Vulcan Rollers are trouble-free, weather-proof, non-swelling." Let the Vulcan Proofing Company send you printed circulars on its "Vulcolastic" Rollers. Gratis.

**32 INKS** — Let IPI send you interesting reading matter on its Vaporin, Holdfast, Lithox and other new inks for packagers. This information is gratis. Post-card brings it.

**33** TWO - COLOR ROTARY PRESS — C. B. Cottrell & Sons Company will send you a booklet printed without makeready describing this press. Send for it. Use the coupon.

**34** LUBRICATION — "There is a Blanchard Pulsator System for lubricating every type and size of printing press." Bulletin B-30 will be mailed to you promptly.

**35** INKS — Use the post-card to get color chart and selector of Flint inks. Offered by the Howard Flint Ink Company.

**36** PAPER HANDLING — Elwell Parker Electric Company offers proof to show how paper-handling costs can be reduced sharply by use of its trucks.

**37** ROLLERS — Let Wild & Stevens, Inc., mail you details on its complete line of press rollers.

## *Composing Room*

**38** HEAT CONTROL for your melting pots. Let Fenwal, Incorporated, send you detailed booklet on its "Thermoswitch". Completely adjustable over a 300 - 1100 degree F. range.

**39** TELETYPESETTER "produces 50 to 100 percent greater output from your line-casting machine.— More type in less Time." Circle this number on the Post-card to receive descriptive book.

**40** DISTRIBUTOR SCREWS — Linotype Parts Company offers data on its screws. "Converts your machine to fast distribution."

**41** MATRIX CONTRAST Corporation offers booklet giving facts showing how "use of Matrix Contrast Service eliminates one third of all machine errors." Send for it.

**42** SAW TRIMMER —"C&G Saw Trimmers increase production and reduce costs materially." Milwaukee Saw Trimmer Corporation this month offers to mail you illustrated literature. Use the postage-paid return card.

**43** TEMPERATURE CONTROL— "Partlow indicating control saves fuel, promotes better slugs, reduces typesetting machine troubles." Partlow Corporation offers to send you complete information.

**44** SAW — Free booklet entitled, "Short Cuts With Odd Measures" will be sent to you by the Mohr Lino Saw Company. Just fill out the coupon and mail. We do the rest.

**45** PROOF PRESS — Vandercook & Sons will be glad to send you details on its new and rebuilt proof presses. No obligation, just fill out the coupon and mail.

**46** LINOGRAPH '50' gives more value per invested dollar, states the Linograph Corporation. This number circled on postage paid return card brings you, gratis, Linograph catalog.

**47** REPLACEMENT PARTS for Linotypes and Intertypes. Use the postage-paid return card to get free catalog of parts, material and repairs. Offered by Montgomery and Bacon.

**48** SAW — "1100 plants have discovered that the Glider obsoletes all others — cuts sawing time one-third." Hammond Machinery offers full description and prices in interesting booklet. Send for it. Just circle this number on the post-card.

**49** METAL FEEDER — "The Jordan continuous feeder has many exclusive features." United American Metals Corp. will be glad to send you interesting data. Learn more about this feeder.

**50** CUT CEMENT—"Booth's Zink Cut Cement holds with the grip of a Tiger's paw — saves time in the composing room." Let the E. A. Booth Rubber Company send you full information. Circle this number on the coupon.

**51** DETAILS AND SPECIMENS of Ludlow typefaces will gladly be sent you by The Ludlow Typograph Company. Learn more about Ludlow equipment.

**52** DETAILS on New Universal Intertype are offered by the Intertype Corporation. Check up on this new typesetting machine. No obligation, just fill out the card.

**53** SPECIMENS of the new Monotype "Stylescript" are offered by Lanston Monotype Machine Co. Post-card brings booklet on this typeface.

**54** MERGENTHALER LINOTYPE will be glad to forward you a copy of its booklet "Food Store Ads from the Linotype Keyboard." Coupon brings it to you.

**55** COMPOSING ROOM SAW — New Hammond Mercury "has what it takes." Hammond also features popular priced Bench Mercury. Coupon brings you free complete literature. Learn more about these saws.

**56** MOTOR & ROUTER — Cushman Electric Co. will send illustrated booklet showing features of its Offset Motors for Linotype and Intertype drives. Circle this number on the coupon.

## PLEASE FILL OUT THIS CARD CAREFULLY

PRINTING EQUIPMENT Engineer June
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | | | | | | | | | | |

PRINT YOUR NAME AND ADDRESS

NAME .....TITLE .....DEPT. .....

FIRM NAME .....

STREET .....CITY .....STATE .....

## *Stereotype Dept.*

**57 STEREOTEX MACHINERY** offers to send you full data on the Stereotex direct Pressure mat moulding press. Check up on the features of this new machine.

**58 ROTARY SHAVER** —"Shave from type high to 16 gauge with .001" accuracy." Robert W. Barker will send complete data on the Barker Rotary Shaver. Circle this number on the coupon.

**59 DRY MAT** — Circle this number on the coupon to receive booklet entitled, "How to get the most from your dry mat and stereo expenditures." Offered by Certified Dry Mat Corp.

**60 FLAT & CURVED SCORCHER** —"Combined scorcher centralizes your operations—saves money." Let Speed Products Company send you pamphlet. Free.

**61 ROTARY HEAD PLATE SHAVER** — The Ostrander-Seymour Company will be glad to send you details and specifications on its shaver. Make use of this opportunity to learn more about this shaver.

**62 MASTER FORMER** —"Mechanize your dry mat shrinkage with automatic Vacuum control." Sta-Hi Corporation offers to mail you booklet describing the Sta-Hi Master Former. Coupon brings it to you.

**63 MAT CASTER** — "For better plates and faster casting, investigate the Hammond Easykaster "8", equipped with or without 800 pound valve-controlled melting pot." Literature, prices and terms offered by Hammond Machinery Builders, Inc. No obligation, just fill out the coupon.

**64 STEREOTYPE SUPPLIES** — Eastern Newspaper Supply offers to send you latest complete catalog of supplies. Learn more about "Flecto" Gummed backing felt, "Plate-Tak" Cut Mounting Tape, and "Tru-Mold" Cork Molding Blanket. Gratis.

**65 TUBULAR VACUUM CASTING BOX** — "Plates can be worked faster — buckling and sinks are eliminated by use of the Duplex Casting Box." Let the Duplex Printing Press Company send you full description and details. Just fill out the coupon and mail.

**66 DRY MATS** — Wood Flong offers sample lot of its dry mats. "Wood Mats give white highlights—solid blacks—true halftones and middletones — deep molds — clean plates."

**67 DIRECT-PRESSURE MOULDING** — Lake Erie Stereotype Equipment Corp. will send you interesting facts on its Directomat. Use the coupon.

**68 DRY MAT** — Burgess states, "The ability of the stereotyper shows to best advantage when he uses Burgess Chrome Mats." Circle this number on the coupon to get samples and booklet describing Burgess Mats.

**69 CATALOG** of supplies for the printer will be mailed to you by American Publishers Supply. Contains many useful products used daily in stereotype departments. Coupon brings it to you.

**70 DRY MAT** — Flexideal Dry Mat Corporation offers free samples of Flex Dry Mats. Mention gauge, shrink, type of equipment you use. Fill out the coupon and mail. We do the rest.

## *Miscellaneous*

**71 PHOTO-ENGRAVING SUPPLIES** and equipment are discussed in literature which will be sent you by the National Steel and Copper Plate Company.

**72 ZINC** — "No deep scratches in Edes Roto-Grip Zinc." Let Edes Mfg. Company send you further interesting details. No obligation.

**73 PAPER DRILLS** — Full illustrated catalog will be sent you by the Challenge Machinery Company. Use this free service.

**74 "THE RAPID WAY"** describes the newspaper side of photography, artwork, engraving, typography, etc. Forty page booklet will be sent you by the Rapid Electrotype Company.

**75 ENGRAVING EQUIPMENT & SUPPLIES** — Johnstone Electric Company offers details on its line of products. Use the coupon.

**76 METAL & BASE** — Let E. W. Blatchford Company mail you information on its type metal and on its plate mounting system. Use the post-card at the bottom of the page. No obligation.

**77 ENGRAVERS SUPPLIES** — Zinc, Copper, Equipment, Chemicals and special processes. Harold M. Pitman Company offers details.

**78 ZINC** — "Dependable plates mean better engravings and more work for letterpress." Atlantic Zinc Works will send you booklet entitled "Getting Down To Zinc Facts."

**79 PRINTING EQUIPMENT MOTORS** — Kimble Electric describes the modern design of its motors, built especially for the printer, in a booklet which will be mailed to you without obligation. Coupon brings it.

**80 DIAPHRAGM CONTROL** — R. R. Robertson will be glad to forward you circular giving full details on this control. Use the Postage-paid return card.

---

Postage Will be Paid by Addressee

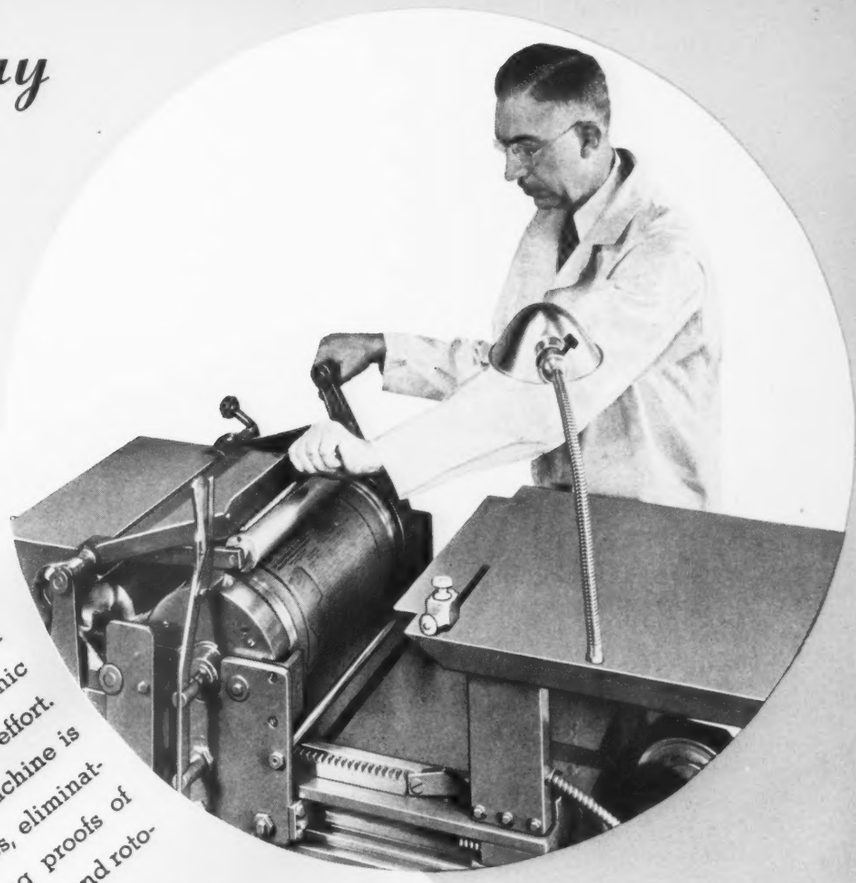
No Postage Stamp Necessary If mailed in the United States

**BUSINESS REPLY CARD**
FIRST CLASS PERMIT NO. 2285 (SEC. 510 P. L. & R.) CLEVELAND, OHIO

**PRINTING EQUIPMENT *Engineer***
**1276 West 3rd Street**
**Cleveland, Ohio**

# *An Easier Way to Make*

# TRANSPARENT IMPRESSIONS



DEVELOPMENTS within the past few weeks in the production of transparencies for use in making rotogravure cylinders and lithographic plates, insure more certain results with less effort. The No. 4T Vandercook Proving Machine is equipped for making transparencies, eliminating the necessity of photographing proofs of type, in the production of offset plates and rotogravure cylinders.

Formerly, transparent impressions were made on Vandercook Proving Machines and dusted with lamp black or bronze powder. A new, clean method eliminates the use of lamp black or bronze powder, and actually makes the transparencies better than black and white prints. The use of transparent impressions speeds up production and reduces cost. Complete information on the LATEST Vandercook method will be sent upon request --- without obligation.

## VANDERCOOK & SONS

Main Office and Factory
908 North Kilpatrick Avenue, Chicago, Illinois

Eastern Branch
220 East 45th Street, New York City

CANADA: SEARS LIMITED, TORONTO, MONTREAL, WINNIPEG, VANCOUVER

# Don't worry about the FUTURE . . . Buy what you need TODAY

**Yes,** by all means buy the typesetting equipment that you need right now . . . but keep one eye on the future, too. The UNIVERSAL Intertype of today is the composing machine of tomorrow. Therefore, buy Universal Intertypes!

**These Machines** offer a complete flexibility of equipment . . . This means (1) interchangeability with existing Intertype magazines and matrices, including font distinguishing systems; (2) future changes, if required, from the standard magazine equipment to extra-wide display magazines, or vice versa; and (3) conversion from one model into another . . . even from a mixer into a non-mixer, or vice versa.

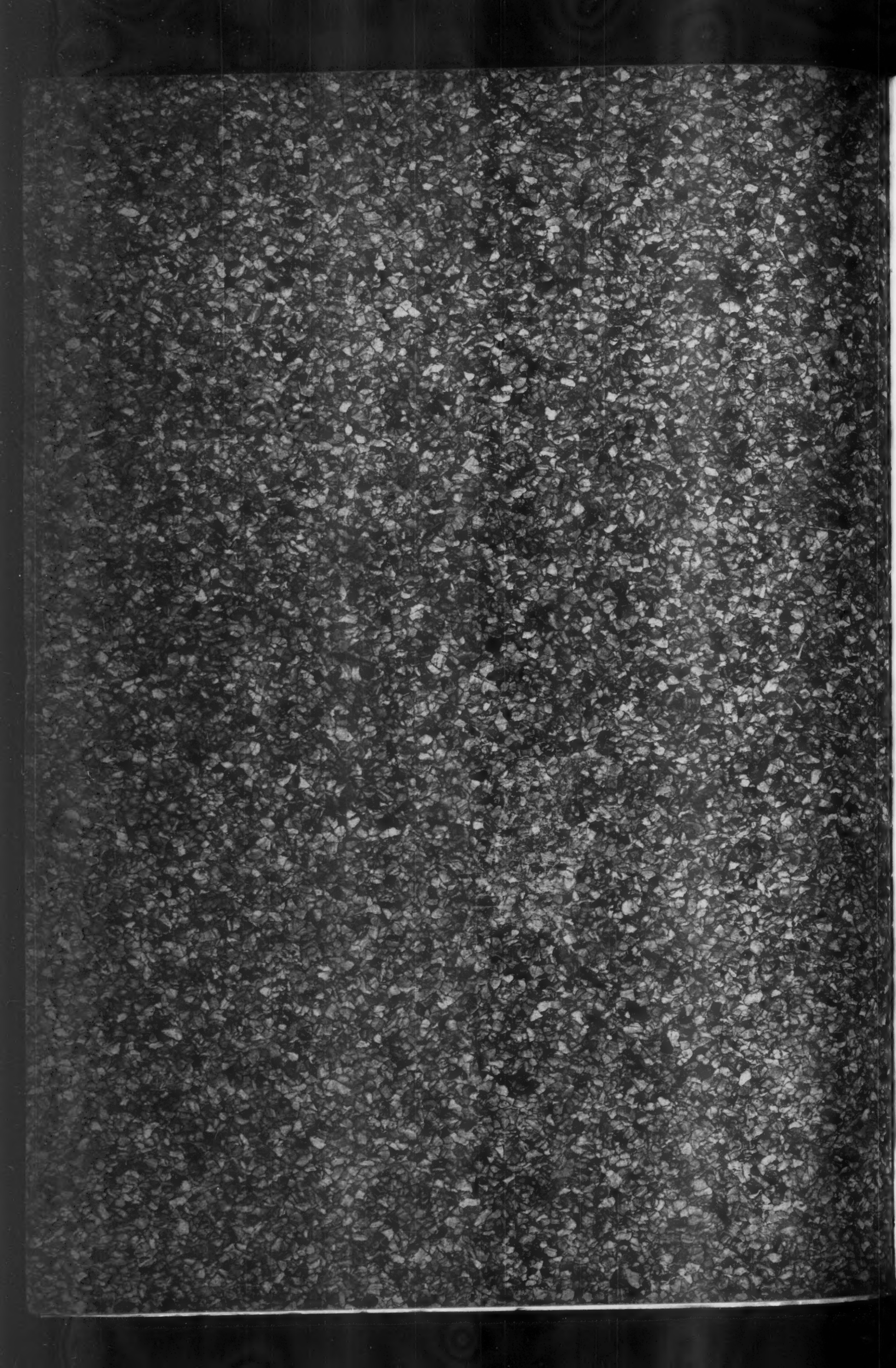
**These New Features** have been aptly referred to as *investment insurance* . . . and they constitute an *extra* reason, today, for standardizing on Intertypes. Other reasons become apparent when you investigate details. For example . . . time-saving twin distribution, and finger-flip changes of type, *on non-mixer machines;* automatic font selection, on both mixers and non-mixers; new power-operated channel entrance, and the Intertype mat-traffic light; and several important features designed to give you *better slugs,* including the Intertype baffle mouthpiece, mold-cooling blower and bulb-type thermostat.

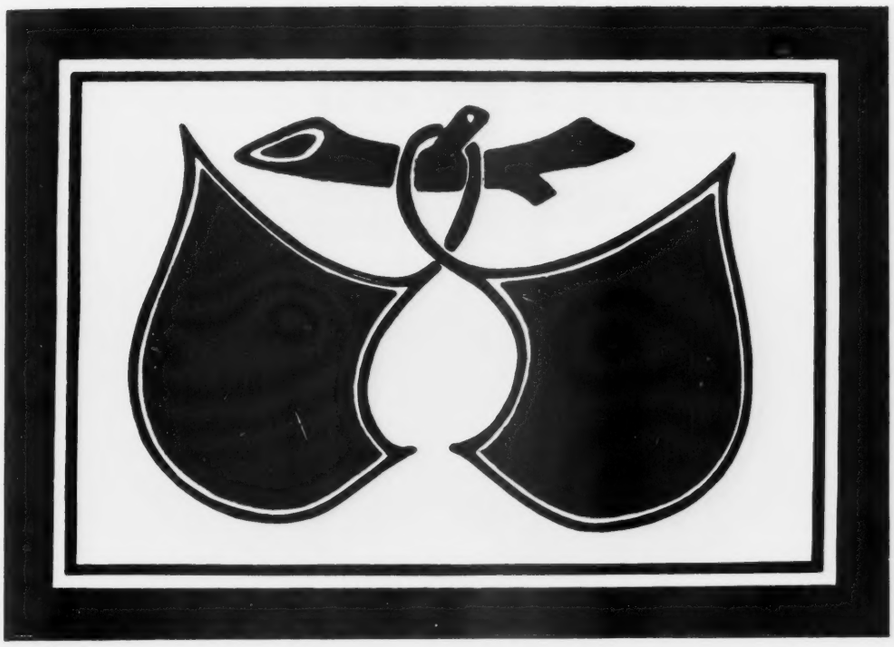
**Furthermore,** several auxiliary features are available to Intertype purchasers—automatic devices designed to save time and speed production—including the new automatic magazine shift, automatic quadding and centering, automatic ejector blade changing (with six-pocket mold disk), automatic metal feeder, and other profit-earning features . . . Investigate!

**INTERTYPE CORPORATION • BROOKLYN**

**STEP AHEAD with the UNIVERSAL INTERTYPE**

SET IN FUTURA FAMILY





# PRINTING EQUIPMENT *Engineer*

INTERNATIONAL CRAFTSMEN'S CONVENTION

SAN FRANCISCO, AUGUST 4 - 8, 1940